

# SCHOLASTIC COACH

MARCH 1955 • 35¢



In this issue  
**TRACK**

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High Jumping  
Pole Vaulting  
The Half Mile  
The Two Twenty

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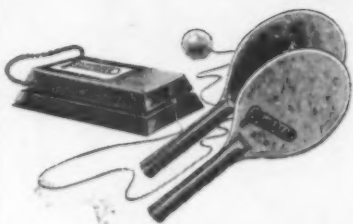
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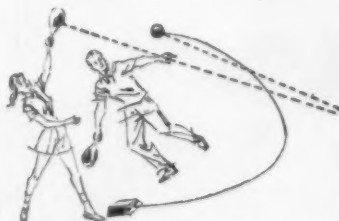
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# SCHOLASTIC COACH

Reg. U. S. Pat. Off

**VOLUME 24 • NUMBER 7 • MARCH**

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Cover photo of Don Laz by M.I.T.

**Publisher • G. HERBERT McCRACKEN**

**Editor • HERMAN L. MASIN**

**Advertising Manager • OWEN REED**

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SCHOLASTIC COACH IS ISSUED MONTHLY TEN TIMES DURING THE ACADEMIC YEAR (SEPTEMBER THROUGH JUNE) BY SCHOLASTIC CORPORATION, M. R. ROBINSON, PRESIDENT, PUBLISHERS OF SCHOLASTIC MAGAZINES FOR HIGH SCHOOL STUDENTS.

ADDRESS ALL EDITORIAL AND ADVERTISING COMMUNICATIONS AND ALL CORRESPONDENCE CONCERNING SUBSCRIPTIONS AND CIRCULATION TO SCHOLASTIC COACH, 33 WEST 42 ST., NEW YORK 36, N. Y.

SUBSCRIPTIONS FOR THE UNITED STATES, \$2 A YEAR, CANADA, \$2.25. FOREIGN, \$2.50. BACK ISSUES: CURRENT VOLUME, 25c; PREVIOUS VOLUMES, 50c.

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# Those long-term contracts

ONE of our needle-witted readers with a memory like a pachyderm recently backed us to the wall and impaled us with this bristling polemic:

"Several years ago," he wrote, "you penned an editorial in which you lamented the insecurity of football coaches and recommended long-term contracts as a panacea. Well, you may have had a point THEN. But you certainly don't have one NOW.

"In recent years, our colleges have been showering their coaches with bigger and better contracts? And how have the gentlemen responded to these generous gestures? By running out of their agreements with a shameful apostasy. Some commentary on their personal integrity and code of ethics!

"It seems to me that the colleges are getting the dirty end of the club. When they break a contract, they're compelled to pay it off completely. When a coach breaches it, he walks off unscathed.

"So long as coaches continue to cavalierly dismiss their contractual obligations, all their exhortations about honesty, sportsmanship, and playing the game by the rules are going to have an extremely hollow ring, indeed!"

Timber! That's a mighty powerful ratiocination. It has power and point, and it puts the coach right on the hook. At the same time, however, it's unfairly weighted.

The basic point to remember is that *contracts are not designed for the protection of the colleges*. The schools have never needed protection, and still don't. Contracts are drawn for the security of the coach.

If the coach repudiates his obligation, it's a matter between himself and his conscience. You may not condone it—we don't—but the original sin isn't his. The college enticing him must accept at least 50% of the guilt. *Any college hiring a man already obligated to another*

*employer is an accessory before the fact.*

The ludicrous contradictoriness of the problem is clearly exemplified by the latest *cause celebre*. The U. of Arkansas, enchanted by its unexpected success under Coach Bowden Wyatt, elevated his salary and showered him with gifts. Since Wyatt had already signed a long-term contract, Arkansas sat back happily—contemplating years of joy under its gifted coach.

So you can imagine their consternation when Wyatt jumped the reservation to accept an offer from Tennessee. The Razorback marching and chowder society seethed with indignation, and you might say rightly so—until you examine the case more closely and discover the curious double standard under which our colleges operate.

Only two years before, Arkansas had hired Wyatt away from Wyoming—where he had been working under a 10-year contract!

And whom did Arkansas get to replace Wyatt? Fellow named Jack Mitchell—who had just signed a 10-year pact with Wichita!

So how can our colleges declaim about the sanctity of contracts? Without their tacit approval and blandishments, there simply would not be any occasion or opportunity to "sin."

**S**UBWAYING over to the annual meeting of the college football coaches the other week, we took a seat next to a blond crude-cut schoolboy engrossed in a comic book. Carelessly piled alongside the youth were three or four dog-eared textbooks.

As we were about to open a newspaper, our eye was caught by the wrapper on the topmost text. On the brown wrapper was a free-line drawing of a football team. A streamer across the top told us it was "The best team our school ever had . . ." Under the picture was a

smaller block of type undecipherable from our position.

Intrigued by the drawing and the caption, we asked the kid if we could take a closer look at the book. "Sure, go ahead," he grunted, returning to Wild Boy of the Congo.

We picked up the book and the lettering immediately took form, as follows:

"Our boys played as a team . . . always . . . with perfect coordination between line and backfield. MacGregor never refused to pass the ball to Johnson because of the color of his skin, or to O'Grady because he went to a different church on Sunday. Nor did Goldstein fail to take out a man because it meant that Schmidt would score a touchdown.

"All-American,' our folks said . . . and they spoke truer than they knew. The same spirit that gave our school a great team has made America strong. Let's keep it that way—for our own sake—for America's sake. So—

"If you hear talk against a schoolmate or anyone else because of his religion, race or name—don't wait—tell him that kind of talk is UN-AMERICAN. Help keep our school ALL-AMERICAN!"

We put the book back on top of the pile, feeling good somehow. It was the nicest book cover we ever saw.

**A**S a schoolboy at Penns Grove (N. J.) last spring, Don Bragg established himself as the greatest high school pole vaulter ever developed in the East. A steady 13 footer, he catapulted into the national limelight with a 13-9¼ showing in the national championships—good enough for third place.

Now a freshman at Villanova College—and a steady 14 footer—Don is mostly a self-trained athlete. And where did he pick up the ABC's of the event? Quote: "I read all about it in *Scholastic Coach*, in the articles written by Dick Ganslen!"

Pause while we take a bow.

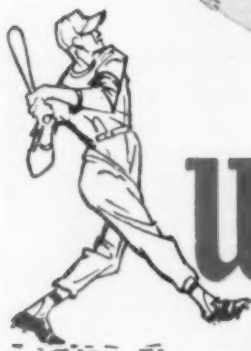




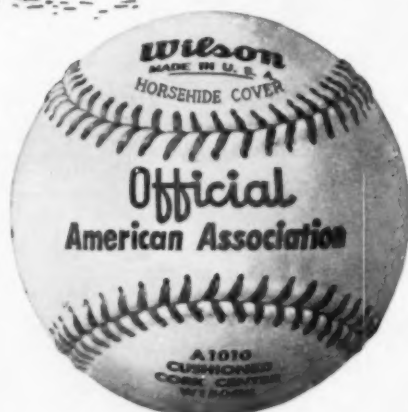
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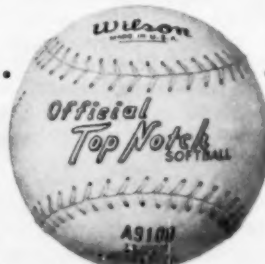
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# 16

## Common Mistakes in Tennis Stroking



**I**F it were simple to hit a moving object, tennis would be easy. Unfortunately, it's a rather complex art. The necessity of coordinating various body parts while in motion makes this sport attractive and challenging but difficult to the beginner.

The first few weeks are the toughest, and assistance will be urgently needed. Here are the most common mistakes the instructor should look for.

**TENSION.** In an effort to stroke the ball properly, the player grips his racket tightly and tenses up. This produces a loss of timing. The idea is to remain relaxed and get the feel of the ball against the strings. Let the racket do part of the work.

**CROWDING BALL.** Ever try to hit a home run leaning over the plate? It can't be done. You need leverage to strike an object, and this requires swinging room. Some players never realize they're standing too near the ball to swing correctly. They feel safer with their upper arm against the side of the body, even though power is sacrificed.

Next time set up at the right distance from the ball—an arm and racket length away.

**HITTING LATE.** In war, "top late and too little" can add up to defeat. In tennis, the late swing is a one-way ticket to weak and ineffective returns! Observe your racket

throughout a complete stroke. When you swing late, the top bevel recedes and your playing instrument doesn't reach its best hitting position.

Try meeting the ball in the center of your stroke—about opposite the left foot for forehands (if you're a right-hander).

**POOR FOOTWORK.** Unless the feet are placed in line somewhat parallel to the net, a proper follow-through is difficult. In backhands particularly, weight from the right side of the body cannot be utilized unless you turn sideways to the net.

Get the habit of turning as you begin your back swing. Remember, left foot and shoulder are forward in forehands; right foot and shoulder for backhands! (Opposite for left-handers.)

**NOT WATCHING BALL.** The average novice watches the ball from the time it leaves his opponent until it arrives about two to four feet ahead of him. He then swings lustily, hoping contact will be made near the middle of his racket face. Note his look of surprise when the ball glances off the shoulders or throat and bounds onto the next court!

Try to watch the ball until it reaches the strings of your racket. Chances are you won't see this, but

the effort will improve your ability to center returns.

**TOO MUCH WRIST . . .** and in some cases, too much elbow. The ladies have a particular tendency to overwork the wrist. Though they're not the only offenders, it's well to remember that the wrist has neither the size nor strength of heavier muscles located at the shoulders.

By starting the stroke higher, we utilize the deltoids to obtain maximum hitting power. Hold the wrist moderately firm throughout the stroke.

**BAD COURT POSITION.** For some reason, most beginners attempt to rally from a position inside the baselines. As a result they're required to do two dangerous things: (1) hurry the stroke, and (2) make returns of balls that bounce at their feet.

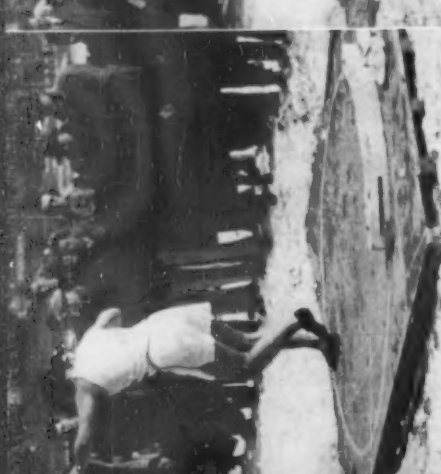
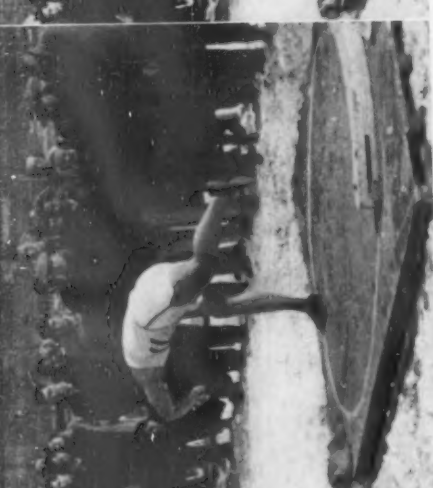
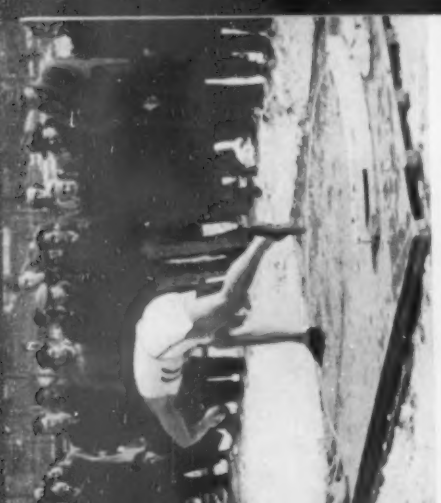
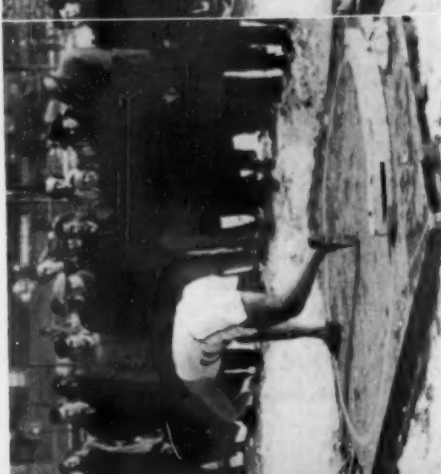
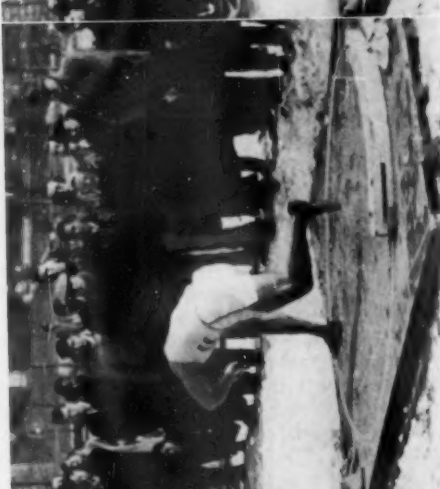
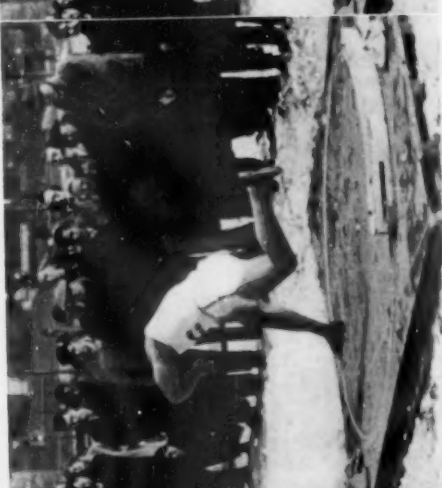
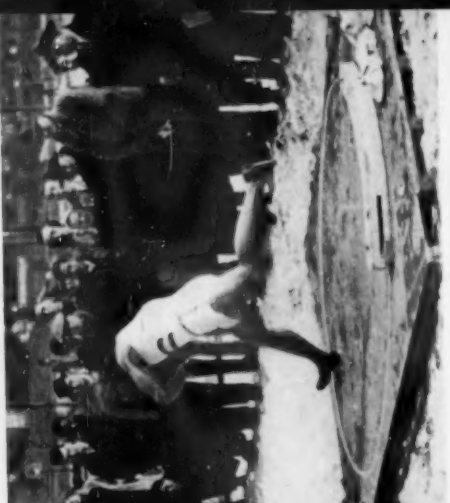
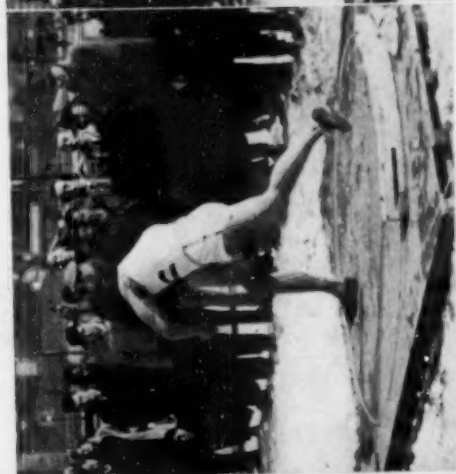
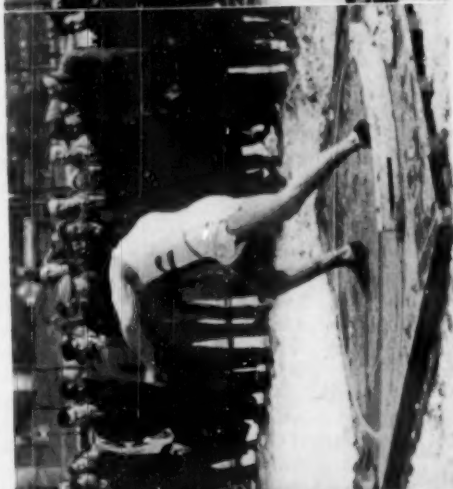
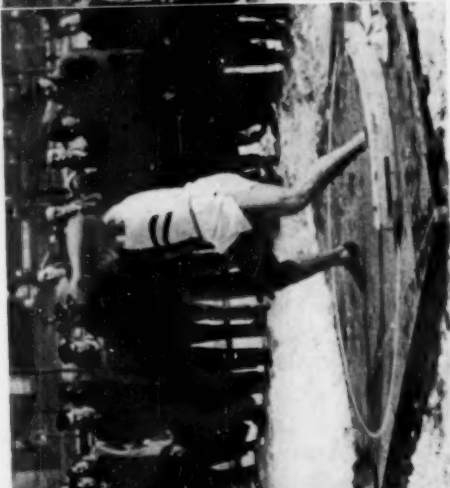
By moving to an area four to eight feet behind the baseline, additional moments are gained to execute the back swing. After moving in for the opponent's drives, always return to the area at the center of the court behind the baseline!

**OVER - GRIPPING.** An overly tight grip tends to lock the muscles in the lower arm, causing fatigue and a loss of "feel" and timing. The racket should be held firmly but not with excessive tension. After rallying a few minutes, feel the leather grip with your non-gripping hand. If it's damp, chances are you're

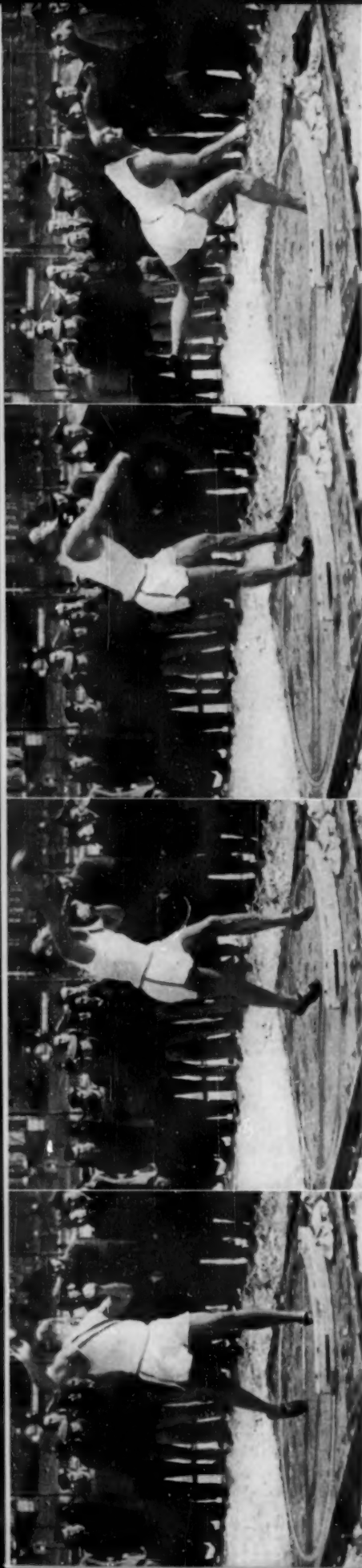
(Continued on page 64)

By **JOHN A. KRAFT, Jr.**

Tennis Pro, Memphis Country Club







**A back-facing stance and deep dip characterize the famous "O'Brien form"**

# PARRY O'BRIEN

## His Form and Training

By **BERT NELSON**  
Los Altos, Calif.

**T**O REACH the amazing distance of 60 ft. 10 in. in the shot put, Parry O'Brien has pioneered a form which qualified critics said would not work. He has achieved a mental attitude which permits both a tremendous amount of hard work in practice and the ability to achieve peak efforts on selected occasions. And he has thoughtfully developed a training routine which apparently is achieving a maximum effectiveness.

In short, O'Brien is a determined, gifted athlete who has used his native intelligence with as much effect as he has used his fine body in achieving standards once thought impossible.

O'Brien, now a 230 pound, 6 ft. 3 in., 23-year-old, has always been a fine all-around athlete. Good at his once favorite sport of basketball, Parry also was a two-time all-league high school end, and, of course, a shot put star. He entered U.S.C. on a football scholarship, but after his freshman year (1950), when he es-

tablished a new national frosh record of 53 ft. 10½ in., he took coach Jess Hill's advice and concentrated on track.

What was undoubtedly football's loss (and Hill's too, for he later became SC grid coach) is most decidedly track's gain. For in addition to rewriting the record books, Parry is contributing much with his new technique and approach to the event.

The O'Brien form, now being widely adopted on all levels, was derived in 1951. Parry was in Germany with an AAU squad, having upset Jim Fuchs in the national championships. He was competing so often that it imposed a physical strain, and he began wondering if there weren't some way of achieving the same results in an easier fashion.

O'Brien experimented with a new form during the rest of the trip, but returned to his orthodox style upon resuming workouts in the fall. Shortly thereafter, he chucked the old style completely, having decided it wasn't good enough to defeat the competition, and went to work on the new form.

By the time he won his 1952 Olympic

gold medal, O'Brien had the style pretty well set. But he has continued to work on it, ironing out a few flaws, training his body to accept the new demands put upon certain parts, and endlessly practicing to make a habit of good form.

Basically, what O'Brien has achieved is the application of force to the shot over a longer distance and for a longer time, coupled with a quick explosion in which he reverses the position of his body.

O'Brien assumes a backfacing stance. His right foot is pointed towards the rear of the ring, 180° from the direction of flight. His back is turned to the center of the toe-board, and his eyes are fixed on a point about 10 feet behind the back of the ring.

Before every put, Parry makes certain the area behind the ring is completely free, particularly of people, for some 30 feet. This he does as part of a fixed pattern which enables him to concentrate whole-heartedly on the put itself, and because, having to fix his gaze 10 feet behind the ring, he wants no interference in the area.

The record holder has found that by

(Continued on page 62)



Finger Signal

Head Signal (Finger Fake)



Target (Normal)

Target (Variation)



Shifting Outside



Shifting Inside



Stance for Throw

**T**HE catcher is the "quarterback" of the defense. It's his duty to know the weakness of every batter and how to effectively exploit it. He must know every personality quirk of his pitchers and how to get the best out of each. And being the only player with a panoramic view of the field, he must be constantly on the alert to size up situations and direct the play.

He must be aggressive, cool, forceful, decisive—a real "take-charge" guy. And he should be strong enough to absorb all the physical punishment indigenous to the job.

Summing up, then: The ideal catching type is a big, solidly built, agile, intelligent, dynamic fellow.

Unfortunately, however, you don't find many of these fellows floating around these days. You'll have to settle for somebody considerably less gifted. But so long as the player possesses the right attitude and can master the basic skills, he'll do.

Before breaking down the catcher's job into its 10 fundamental components and analyzing each, I believe some suggestions are definitely in order with regard to the conditioning and equipment of the catcher.

#### CONDITIONING

I've always found that the best way to get the legs in shape for spring training in March is to run

outdoors on grass, beginning shortly after January 1. The idea is to gradually build up wind and leg strength so that you can enter spring practice with still a way to go to reach top shape.

A player who's overconditioned is no better off than a player in poor condition. The strain of catching a full season is too much for a man who gets down too fine too soon.

Don't only run in your workouts. Assume your normal position in back of the plate and go through the motions of calling for pitches and rising to the target stance. If you try to do this all at once in the spring, the strain on your leg muscles—idle for five or six months—will produce



Catching Low Pitch



Catching High Pitch



Blocking Ball in Dirt



Step to Block Plate



Down for Tag



Discarding Mask on Foul



Making Catch of Foul

stiffness and probably severe charley-horses.

Before taking batting practice during the season, it's always advisable to loosen up the legs by jogging in the outfield. Even if you're in great shape, you must still warm up the muscles by running. Otherwise you can pull something that may keep you out of the lineup and subject you to hours of treatment.

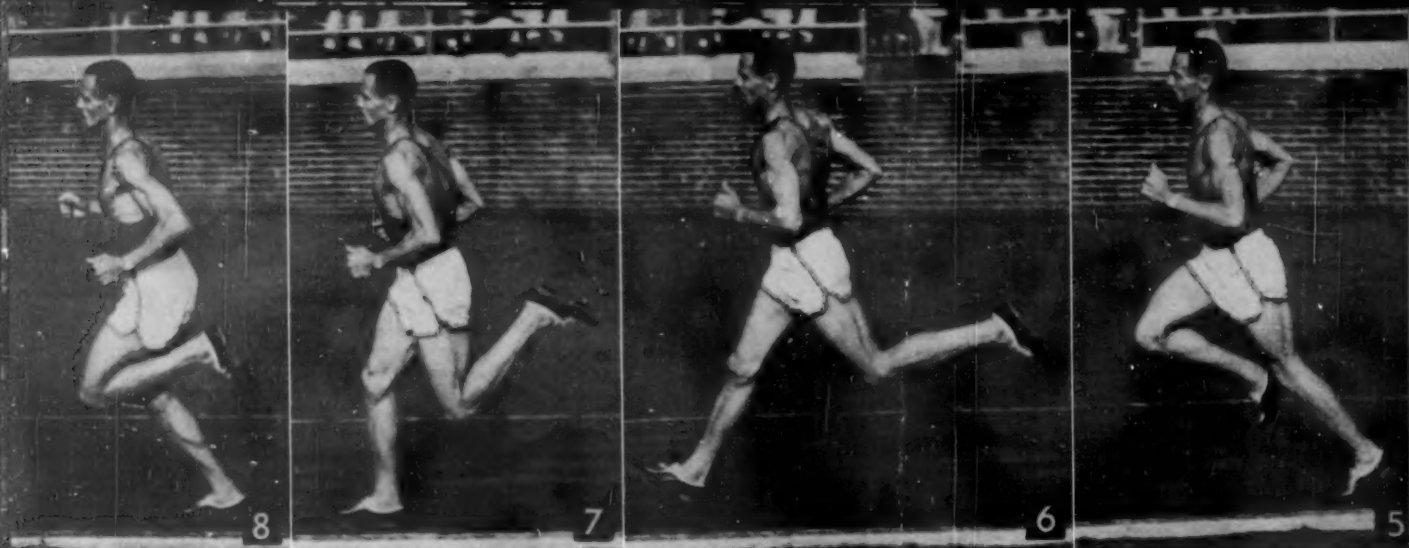
It's also advisable to do some throwing at the time you're working your legs into shape. This is easy if you live in Dixie or California, but tough if you live above the Mason-Dixon line. You can hurt yourself in the cold weather if you're not care-

(Continued on page 42)

By RICHARD ELKIND

## SCIENTIFIC CATCHING





# Mal Whitfield, "Mr. 880"

By LARRY SNYDER

Track Coach, Ohio State University

**P**ROBABLY the only person who can really tell you what makes Mal Whitfield click in the middle distances is Mal himself. A magnificently endowed runner who has already achieved immortality, Mal is an intelligent, extremely self-contained athlete who's always called the turn on his developmental program.

Whitfield came to Ohio State via Lockbourne Air Base, a suburb of Columbus. He had run 1:55 at Jefferson High School in Los Angeles, then entered the Air Corps. In the spring of 1946, he was granted permission to enroll in the University as a full-time student. Since that time, he has had three years of college competition, engaged in some 30 missions over Korea, has twice been Olympic champion at 800 meters, and is the co-holder of the world mark for 880 yards.

He has travelled more than 100,000 miles to compete all over the civilized world, and is now on a 12-country mission for the Department of State—demonstrating all phases of running in connection with the American way of life.

When he reported for track at

O. S. U., he was 6-1½ tall and beautifully muscled, with a long swinging stride which he could accelerate to sprint speed. Mal appeared to possess every prerequisite of a great champion. But, though a willing worker, he was a lone wolf. He preferred to work out by himself, even to the initial warm-up.

We had Bill Clifford as a teammate for Mal, but that didn't interest him. Bill, you may recall, won the NCAA 880 in 1:50.8 at Salt Lake City in a thrilling finish with Jack Dianetti. (That spring, 1947, Mal was in California training with his air squadron.)

Mal's idea of a warm-up consisted of one to four miles of easy jogging, striding, jogging, and more and more striding, intermingled with a half dozen bursts of nearly top speed. After that, he was ready to remove his rubber shoes, don his spikes, and start running. Whatever calisthenics he may have done during that time would have had to be done while he circled the track, always in the outside lane.

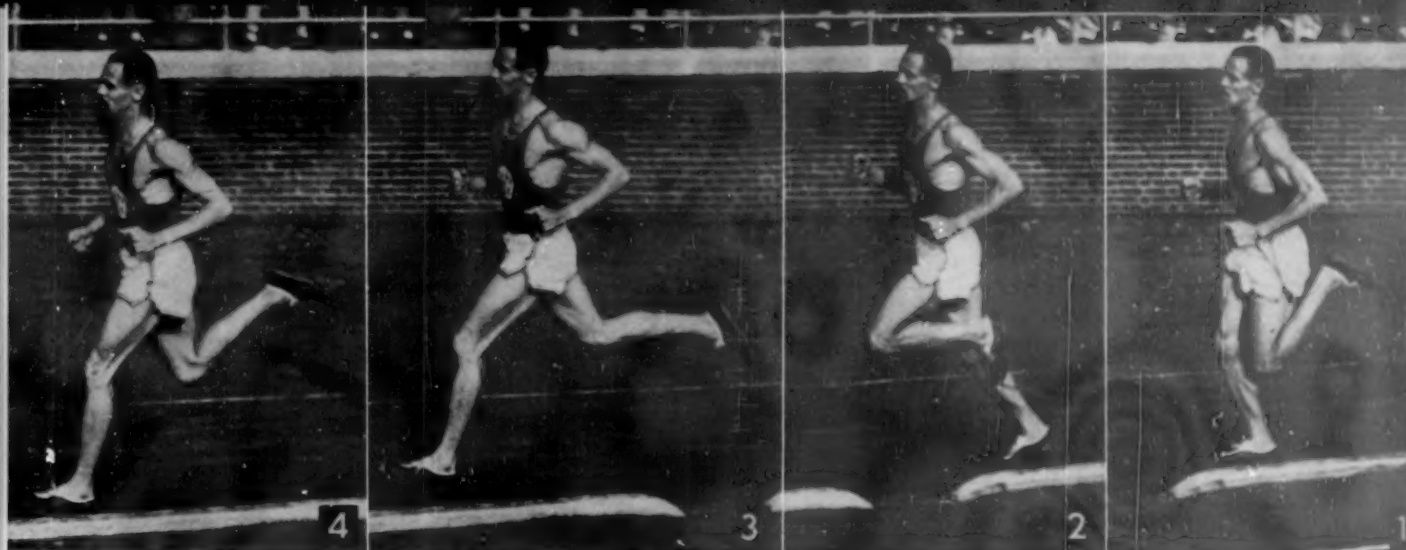
Mal will have to tell you whether or not he knows pace. I always thought he kidded us a bit about his

apparent lack of ability to judge his lap speed. On one occasion, he strode a 48-second quarter while attempting to hit 53 seconds! But, perhaps like all boys, he liked to make our eyes pop with believe-it-or-not performances.

After the warm-up, Mal's daily workouts didn't vary much from those of other great half milers. He ran a lot of 220's, with only the walk back to the start as a rest period—four, five, six of these, with the last two very fast.

Another night, in place of the 220's there would be four or five in-and-outers, striding quarters, 52-56 seconds, with a slow jogging quarter interspersed; or, instead of those in-and-outers, six to eight laps of wind sprints, with the sprints (110 yards) being very fast.

Pace laps, of course, were also part of these workouts. The nights when trials were held, a portion of the regular workout would be eliminated. 300's and 330's were always run in pairs. If a fast quarter was on tap, it might be preceded or followed by a 330. 660 and three quarters were usually tough enough workouts, so that one of them would



### ANALYSIS OF WHITFIELD'S RUNNING FORM

**NO. 1:** Since he's running a mile, Mal is having trouble fitting naturally long stride to slower pace. High left foot indicates relaxation rather than loss of speed. Mal always kicks high behind, usually lifts knees higher in front.

**NO. 2:** Fine technique—body angle forward, forearms at right angle to upper arms and hung loosely so elbows ride close to body, full extension of driving leg.

**NO. 3:** Left foot ready to meet track. Foot has swung forward and is now swinging back toward him as it should. A relaxed forward knee accomplishes desired result.

**NO. 4:** Initial contact with track will be made by outer edge of ball of lead foot. Heel is lower than in sprinting, but doesn't make contact with track.

**NO. 5:** Note forward inclination of body with pushing leg,

body, and head in straight driving line. Mal is getting all of power from rear leg by this full extension.

**NO. 6:** Position of forward leg with foot so close to track is typical picture of Mal putting on the brakes—so that he will not over-run leader.

**NO. 7:** Rear foot (kick-up) is definitely part of Mal's relaxed style. Though no coach would teach it, little or nothing can be done about it when it's there. Arms are again at right angle. Many distance men carry hands lower, but Mal is using normal middle-distance arm action.

**NO. 8:** Note how forward lean assists in passing center of gravity over contact foot. The only working muscle groups are in contact leg. Relaxation of non-working groups is key to Mal's easy style and championship performance.

constitute the only trial that night.

660 was usually the top distance trial for Mal. We learned that, for one reason or another, he wouldn't put out enough energy in a longer trial to make it worthwhile. Both Charlie Beetham and I used every argument and wile to get him to run longer and fast, but he never did. And only now and then were the 660's all out.

That convinces me that no matter how much Mal wants to run 1,500 m. or a mile in record breaking time, he never will. He likes the quick, speedy workouts and races, not the grinding ones.

Just how much endurance he has, we never could discover. He has never participated in cross-country and, to my knowledge, has run only three mile races. He finished second in a 4:30 mile in 1946 and ran about 4:12 to 15 in several races in 1954.

It's likely that a runner (with coaching) finds his best events while in college, and seldom does better in other events later on. Mal's sprint speed indicated that he was fast rather than enduring, and even though he later acquired the desire for longer races the endurance was

not there. Will power can perhaps overcome this, but it's hard for a sprint-type champion at the 880 to find the incentive for moving to the mile or two miles.

Like every champion Whitfield loves to run. On days he couldn't get to the Stadium, he'd work out on the air strip at Lockbourne (he now does this in parks, paths, or any available surface), running with rubber shoes on the concrete runways. The hard surface did his legs no apparent damage. He has never had anything wrong with his feet or legs—no pulls, no arch trouble.

He ran in all seasons, on the bad days as well as the good ones. He's the perfect example of the "natural" who works twice as hard as the average boy to earn the right to be called a "natural."

While running as a freshman, Mal learned the hard way the "maneuver" which was later to win the 1948 Olympic championship for him. Herb Barten of Michigan (4th in the 1948 Olympic 800 m.) would follow the smoothly striding Whitfield, then jump him with such speed at the quarter, or any place up to 660 yards, that Mal would tighten up

and permit Herb to stride on to an easy victory.

On one occasion, Mal so anticipated Barten's delayed challenge that he tied up while 20 yards in front! Another time (at the Big Ten outdoor meet in 1948), Mal decided to run behind Barten. Barten's strategy apparently was to stay behind Whitfield, regardless of the speed of the first 660. It worked wonderfully for Ohio State. Clifford and Washington, of O.S.U., finished 1. 2, with Barten 4th and Whitfield 5th.

Since those early years, Whitfield has gained confidence to the point that he can run a race almost any way he wishes and still win.

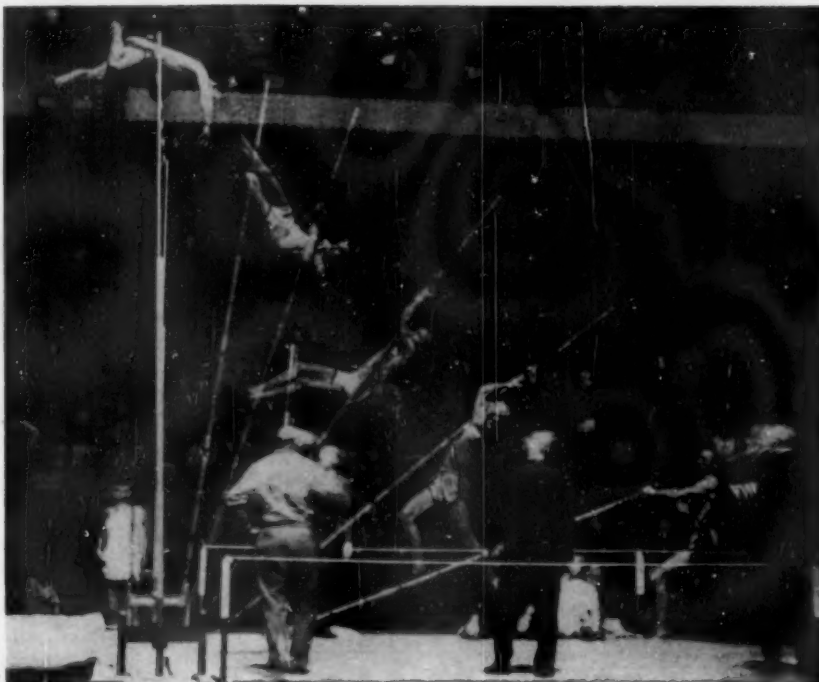
In the Olympic 800 m. final of 1948, Windt, the huge Jamaican, appeared to be the man to beat. Mal ran with the pack for 375 m., then sped from fourth place to a 15-yard lead in the next 50 m. With the other nine champions chasing him, Mal strode across the finish line 3 m. ahead of Windt, with Barten closing fast to get fourth place.

The expression "maneuver" simply means this: When you're going to pass anyone, or two, do it with authority, not hesitantly.

This remarkable study of Bob Richards, the world's greatest pole vaulter, graphically illustrates the coaching possibilities inherent in the stroboscopic camera. All four fundamental techniques of the vault (take-off, swing, pull-up, and release) may be analyzed in this single picture!

By ARNE U. ARNESEN

Assistant Track Coach, M. I. T.



## Pole Vaulting Elements

**P**ERHAPS the chief role of the track coach is to help the individual attain his potential within the time limit available. Since time is an extremely scarce commodity, the coach must constantly seek improved methods of teaching.

The stroboscopic camera, as explained in the January issue of *Scholastic Coach*, offers perhaps the best modern visual aid extant. A single composite print can often put over an idea that no amount of talk and

explanation can do. It shows the coach *what* to look for and *where* to look. The effect of wrong mechanical application, for example, quickly meets the eye and can easily be traced back to the cause. An early remedy may then be applied.

The pole vault lends itself beautifully to stroboscopic study, enabling the coach to produce a clear, simple, and concise understanding of the event. This article—a condensation of pertinent material taken from a

Master's thesis<sup>1</sup>—offers a clear picture of the basic techniques that must be perfected for better and higher vaulting.

The four main fundamentals of the vault include the take-off, swing, pull-up, and release. These, in turn, may be broken down as follows:

**Take-off:** (1) pole plant, (2) last stride, (3) chest to pole.

**Swing:** (1) "hang," (2) hip swing up pole, (3) initial pull.

**Pull-up:** (1) pull of arms, (2) turn.

**Release:** (1) extension of arms, or push-up, (2) bar clearance.

Now let's see how these techniques should be executed, using the strobo pictures as a guide with supplementary refinements by experts.

### THE TAKE-OFF

1. **Pole Plant.** The pole should be planted straight ahead, forward and upward; not up and then into the box. The hands come together during the plant, the back arm thrusting the pole forward through the leading hand and the lower hand re-grasping below the stable upper hand grip. Good vaulters start lowering the end of the pole toward the box when three or, at least, two strides from take-off.



How stroboscopic photography can unmercifully expose the faulty technique of ordinary vaulters. Vaulter at left seems to be jumping up pole, and pulling, from a take-off which is too far back. Chest is not driven to pole, thereby cutting off base for good swing. Vaulter at right is fighting against pole. Pull-up is started from ground and body drops abruptly from pole. Swing has been completely lost.



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2. *Last Stride.* The last stride must be a fully finished stride. The vaulter should run off the ground with a tremendous drive from the take-off leg, through the hip, right on into the pole. This is similar to, and as important as, the last stride in the broad jump.

Ganslen<sup>2</sup> calls this a vigorous stamp of the foot, and Warmerdam<sup>3</sup> emphasizes running off the ground, or an unconscious spring onto the pole. Regardless of what it's called, it's the same action taken consciously or otherwise.

If the plant is effected too late, or the take-off spot too close, the full stride cannot be taken. The whole vault is then defeated as the body is snapped or jerked prematurely from the ground. This eliminates, at least partly, the swing phase which follows, and renders further mechanics inapplicable.

Here are two analyses which highlight the necessity of an early enough pole plant so as not to detract from the full last stride:

Dick Miller<sup>4</sup> says, "The pole slides into the vaulting box a split-second before the take-off foot touches the ground."

Ganslen<sup>2</sup> explains it as follows. "The shift must be fully completed and the pole solidly planted in the box before the vaulter has begun to spring from the ground."

3. *Chest to Pole.* The leg drive from the ground forces the chest to the pole and the arms to extend while absorbing the shock of the take-off. If the chest doesn't reach the pole ahead of the rest of the body, the take-off will be ineffective and the base for the rest of the vault deleted. This phase is a must for automatically riding the body through the next phase of action.

When the chest makes contact with the pole, the arms cease to be the focal point; that is, the hand grip, for what is called the swing-up. The chest, or contact point of the body on the pole, takes over.

## SWING

1. *"Hang."* As the arms lengthen during the leg drive into the pole, and the chest comes to the pole, the body enters the "hang" stage of the swing wherein momentum is conserved by lengthening the radius of the body pendulum on the down-swing. This may be described as a period of long arms and sweeping body.

2. *Hip Swing Up Pole.* As the hips and legs pass the pole during the "hang," the upper body remains in contact with the pole at a point just below the breast line. Most vaulters bear a mark of distinction at this

spot caused by rubbing against the pole.

Now the knees begin to tuck in toward the pole and the body curls around the pole nearly evenly balanced on either side. Direction of the lower body is changing from forward to upward swing; balanced on the pole as you would balance a pencil on your finger.

The pivot point is where the body is in contact with the pole. Now the swing is a "seesaw" action. As the lower portion of the body moves upward and toward the pole, the shoulders and head move down and away from the pole suspended from the extended arms.

The vault should be made primarily in relation to the pole, and not directed at the crossbar. The crossbar clearance is dependent upon the correct mechanical application on the pole.

3. *Initial Pull.* This position on the pole is labeled in a variety of ways by coaches and athletes. Ganslen<sup>2</sup> designates it as the "pre-pull" position. Others use the terms "lay-back" and "rollback" on the pole.

This action is actually the beginning of the upward pull, initiated by the larger back, shoulder, and chest muscles. The hips pass the shoulders during this movement on their upward trajectory. The arms have not come into play as a lifting force.

The initial pull is similar to the application of force in putting the shot. The large muscles start the movement from the base, with a summation of forces from the ground up, through the quickness of the arm, wrist, and fingers. The initial application of force is by the heavy muscle groups.

The initial pull actually hugs the body to the pole and is the one factor which insures the maintenance of the center of balance on the pole in this and following movements. The arms then come into play accelerating the movement upward, and not by the pole.

## PULL-UP

1. *Arm-Pull.* The movement toward and up the pole is already started by the large muscles of the upper body. This leaves a relatively easy, though important, job for the smaller accelerator muscles of the arms. For best results, the pull of the arms is started only when the body is finishing the swing. The legs and hips are at least even with, and better still, above the shoulders, and the pole is well on its way up.

It's a very quick movement, pulling the body past the hands through arm extension. The arm-pull, when

(Continued on page 69)



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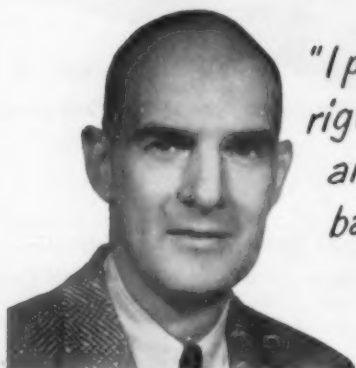
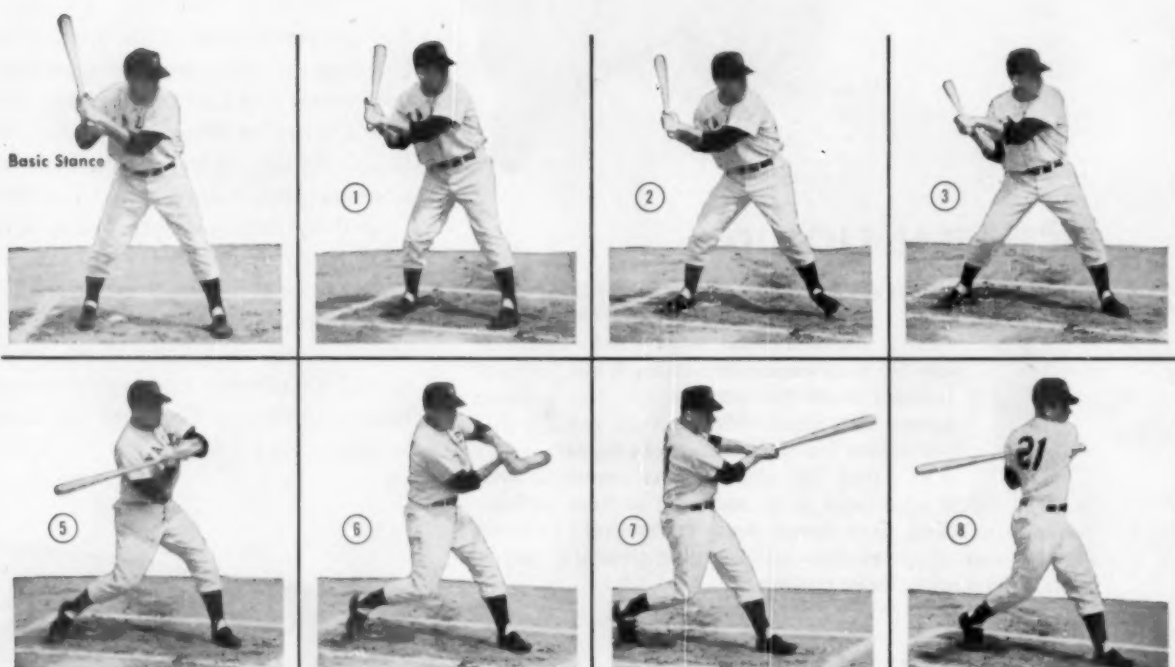
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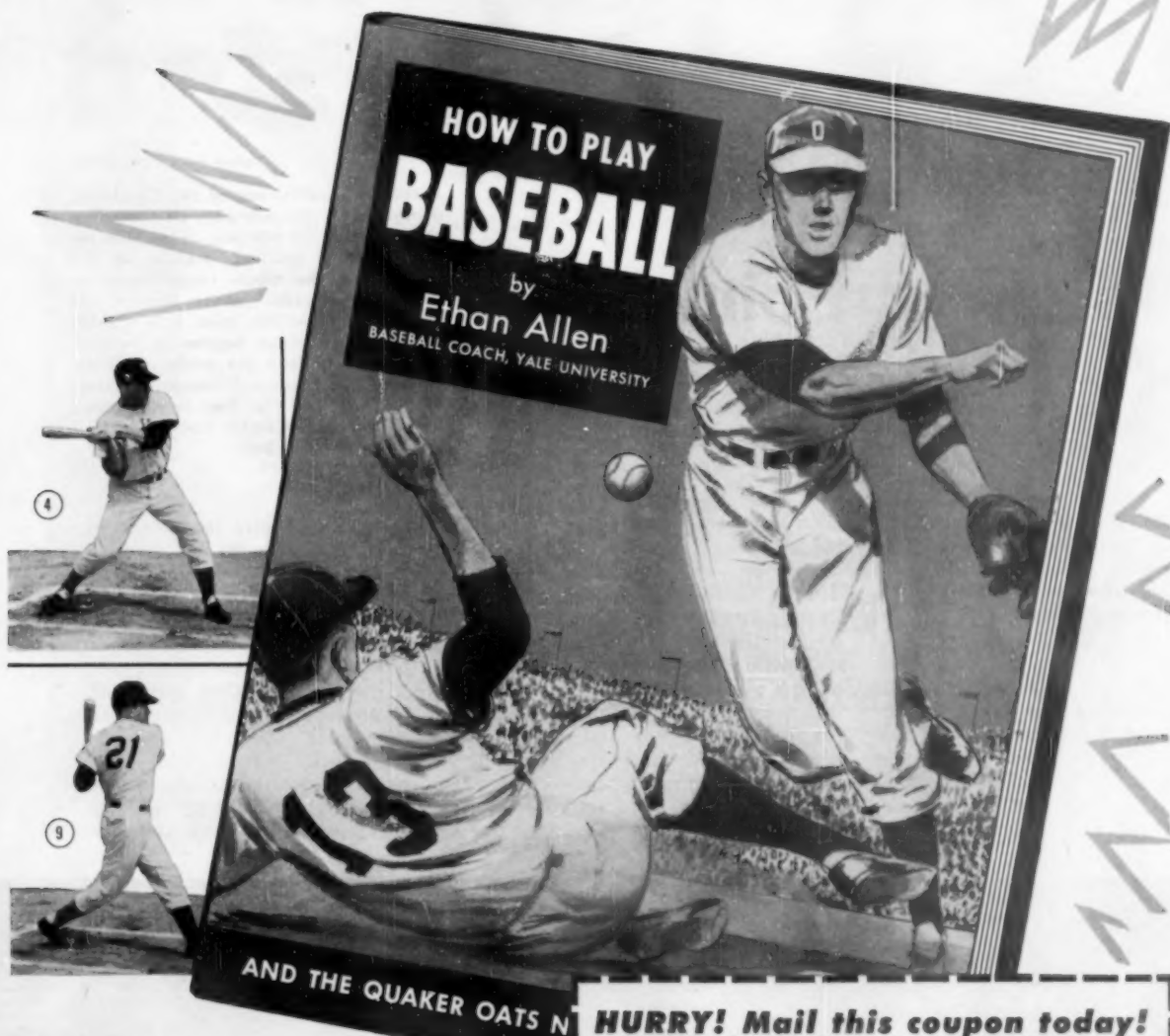
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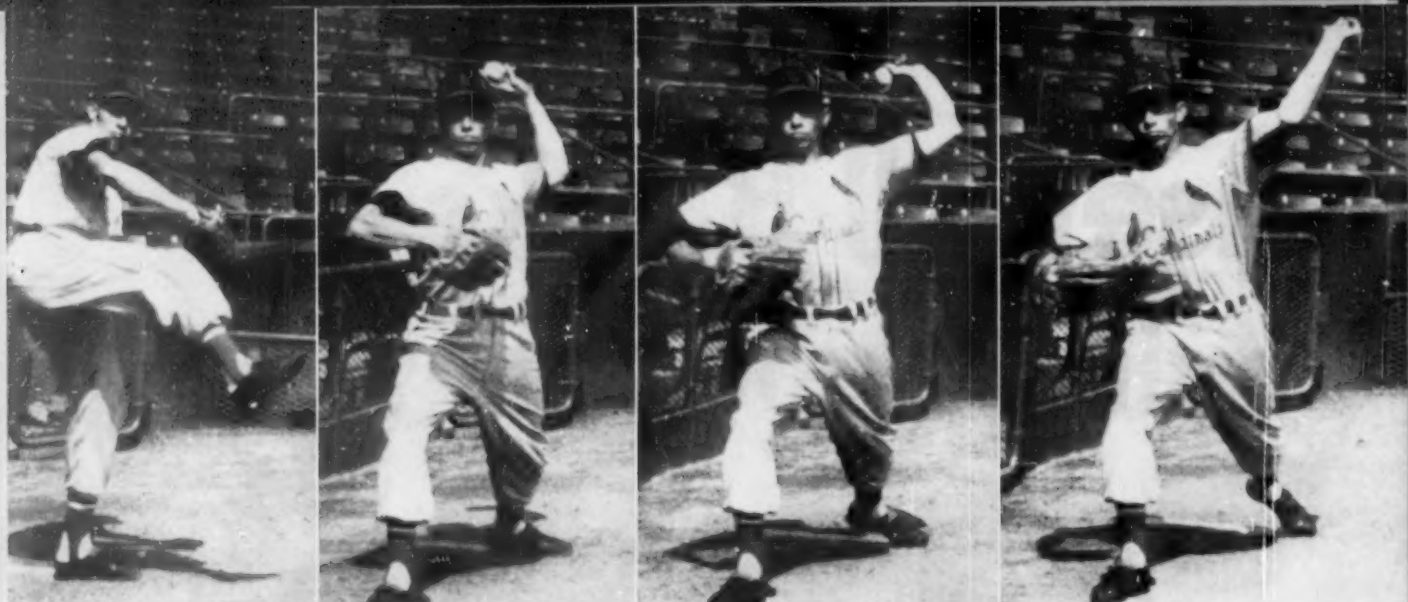
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(Photos by Ethan Allen)

● Harvey Haddix, ace of the Cardinals, demonstrates the nice easy delivery that characterizes his pitching. Note how his front foot is pointed straight at the target, how the elbow leads the wrist, how the shoulder comes behind the throw, and how the eyes stay trained on the target from beginning to end. If you can believe the evidence of the camera, the apparent inward rotation of the arm in the first two pictures below would indicate that Haddix is throwing a screwball!

## Pitching Pointers

By JIM MALLORY

Baseball Coach, East Carolina College

**W**HEN you remember that pitching counts for anywhere from 75 to 85% of a team's success, no coach can be excused for neglecting his hurling prospects.

The extra time spent on these boys can pay huge dividends. Your team may not be able to hit, its defense may leave a lot to be desired. But if it possesses one or two effective pitchers, it will always win more than its share of games, particularly on the schoolboy level.

Let's take up the components of

good pitching—form, control, pitching with men on base, fielding duties, savvy, etc.—and see what can be done to improve the young prospect. In this treatise, we'll assume that you are the pitcher.

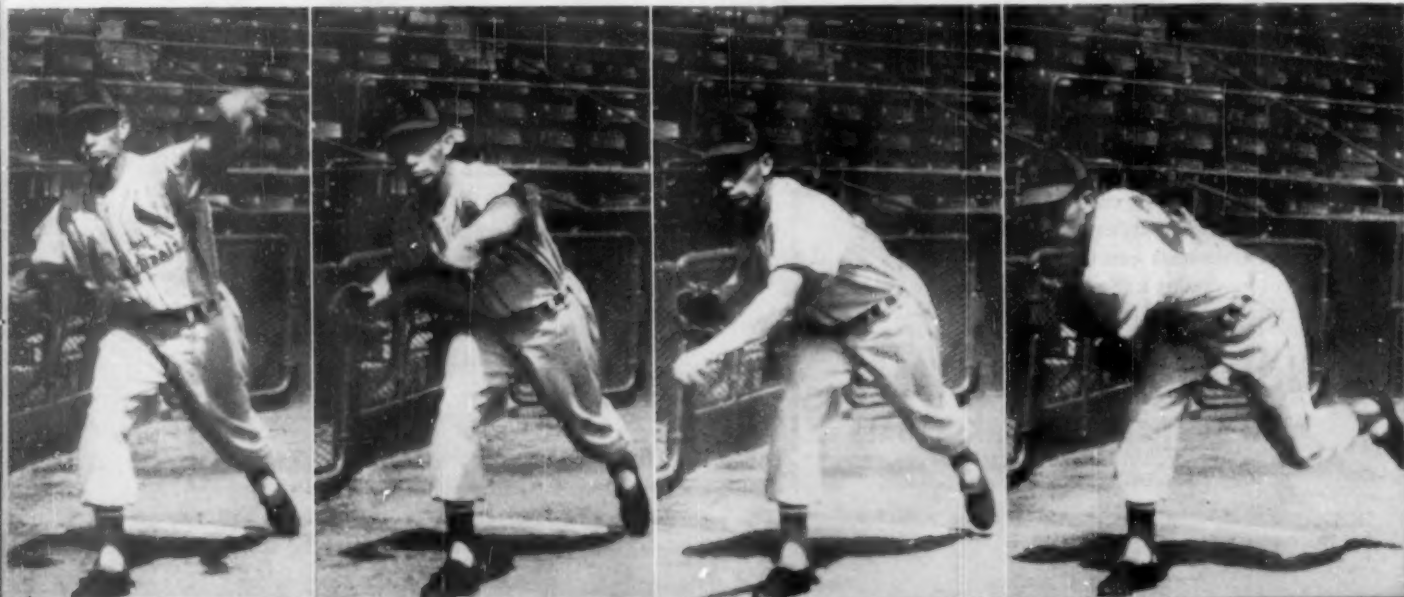
Control is the most effective weapon in a pitcher's arsenal. Work continuously to improve your control of the fast ball, curve, and change of pace. It cannot be overemphasized.

Work on it at every opportunity—on the side lines, in batting practice, etc. And every time you throw the

ball, have a definite target and object in mind. But do not let up to pitch to a spot. Always turn the ball loose with something on it.

You should learn to throw every pitch with as nearly the same motion as possible. By throwing each ball with the same rhythm, stride, and arm movement, you tremendously add to your deception and thus increase your effectiveness. Have your coach and teammates constantly watch you for "giveaways."

Another essential point to remem-





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ber is to hide the ball from the batter. The longer you hide the ball, the more effective it will be.

Try to learn something every minute, every day. Watch the opposing batters when not on the mound yourself, and watch the good pitchers to see how they do the things that make them outstanding. Notice how wild pitchers usually beat themselves.

It's also imperative to learn a move or two with men on base. Never permit a runner to get a walking or "running break" off a base.

One of the best methods of holding runners close is to change your timing in pitching. In other words, hold the ball longer on some pitches, and never deliver until a runner stops. Taking longer helps hold him up and sometimes bothers the batter as well, in making him wait longer at the plate.

It's very important to know how long it takes you to warm up properly and thoroughly before the game. Too many pitchers lose their games in the early innings through lack of proper warm-up and being wild to the first few hitters.

I might add that if you "run" your arm into shape, your control and stamina will improve correspondingly. Your wind and legs have a great deal to do with your control late in the game. Sprint a great deal. It's worth a lot more than jogging.

Make up your mind that you're not going to be discouraged in constantly trying to improve yourself in every possible way. Don't expect results if you're lazy. Success can only be attained by hard work, intestinal fortitude, desire to win, confidence, and keeping in condition at all times.

### PITCHING TIPS

1. Use a large, firm glove. This helps you hide the ball and gives you better protection on line drives.
2. Take your pitching signs on the rubber.
3. Learn to keep your curve and change of pace low.
4. A high inside pitch with something on it is a most effective pitch when ahead of the batter in balls and strikes, particularly with two strikes.
5. Don't work on a batter's weakness until you get ahead of him.
6. Don't overpitch. Put something on your fast ball and throw it right down the alley.
7. When you're behind and can still get your curve over the plate, then you're becoming a pitcher, not just a thrower.
8. Whenever in doubt on the rubber, back off.

9. Own at least three sweatshirts. These should have some wool content.

10. Every time you throw a ball—whether warming up, playing pepper or catch, or in a game—aim at an imaginary target—high, low, inside, outside.

11. The only way to learn baseball is by observation and by listening to older players, coaches, or managers.

12. Make yourself a good fielder by practice. The pitcher who's active on his feet, able to field bunts, back up throws, and field his position, will be a big percentage winner.

13. Never, never, pitch slow "stuff" to weak hitters.

14. The young pitcher shouldn't fool with freak deliveries or pitches. If you can control your fast ball, curve, and change-up, you can get by easily.

15. After a hard workout, get out of your wet sweatshirt as soon as possible. A good shower and a rub-down will reduce sore arms to a minimum.

### SPECIFIC DUTIES

1. Cover home on short foul flies with third base occupied and fewer than two outs, and on all balls missed by the catcher.

2. Break to your left on all balls hit to the first base side of the infield. If you see you're not needed, you can stop. On slow hit balls and balls hit near the bag, run to a point eight or ten feet up the base line where you can conveniently turn and run parallel to the line. Keep on the inside of the base. This avoids collisions, allows you to face the player fielding the ball, and provides a better target for the thrower.

3. On a ball hit away from the bag, run directly to the bag and station yourself before catching the ball. This happens many times with men on first and second where the first baseman fields the ball in the hole. After his throw to the shortstop, who's covering second, he's often unable to get back; and you must become a first baseman.

4. Man on first—single to the outfield—back up third.

5. Man on second—single to the outfield—back up the plate.

6. Men on first and second—single to right or center—judge the speed of the ball, the speed of the runners, the game situation, and the strength of the outfielder's arm—then back up third or home. If in doubt, back up home. Get back 40 to 50 feet.

7. On a moderate fly ball with  
(Concluded on page 47)

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## DICK DAILEY, 6'7"

By RICH HACKER

Berkeley (Calif.) High School

**M**OST coaches will agree that the two basic requisites needed to become a record-breaker are: (1) Potential physical ability, and (2) Mental attitude and desire.

These may vary slightly according to the specific job involved, but both are essential. In addition, certain conditions also must be present: (1) Good facilities and opportunity, (2) Competition, (3) Aid and encouragement, and (4) Intelligence and the ability to analyze.

Any deficiencies along the line may be compensated for at other points, particularly in the area of physique and desire. We all like to work with a boy who has desire, but if he has enough physique the job still can be done.

I was fortunate to be in the right place (Hayward H. S.) at the right time (1951-52) to play a small part in the career of the fabulous high school high jumper, Dick Dailey, a

lad who has already cleared 6-7 and may be breaking the national interscholastic record any day now.

It's extremely interesting to follow the chronology of a high school wonder—watching him start from practically nowhere and gradually progress to the sublime heights. Many practical insights may be gleaned along the way, which can be applied to other situations.

So, before analyzing the finer details of Dailey's jumping style and



The Daily Review, Hayward

practice schedule, I'd like to present his chronology—starting with that day I first heard about him.

**February 1952.** I had been told about Dick, since he had scissored 5-3 the year before as an eighth grader and had a promising build—being a tall, slim youngster standing 6'1 and weighing 155 pounds. However, as practice got underway, he was just one of several jumpers. His main claim to my attention lay mostly in the fact that I had to be so firm about his learning to roll.

## SCHOOLBOY JUMPING WONDERS

### PHIL REAVIS, 6'7"

By W. HAROLD O'CONNOR

Concord (Mass.) High School

**W**HEN Philip Reavis first reported for track at Somerville H. S. in December of 1951, he gave little indication that he'd soon be setting all-time high jump records for the state of Massachusetts. He offered even less indication that three years later he'd be winning the accepted National Interscholastic

championship in Madison Square Garden.

Indeed, he seemed no more than a fair high jump prospect whose ceiling would be limited by lack of height. That he actually did add a full two feet to his initial high jump mark is a tremendous tribute to the foresight, patience, and wise guidance of his coach, Dick Hegarty.

The record of Reavis's progress, the stages through which his coach took him, and the little individualities in style that were added on the way are all valuable to any stu-

dent of high jumping mechanics.

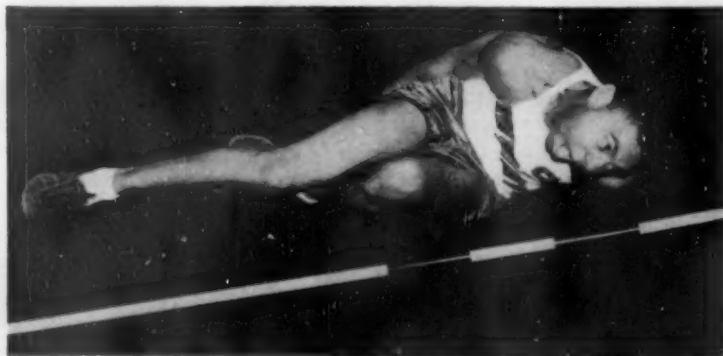
In December, 1951, Reavis was just two months past his 15th birthday. He stood 5 feet 7 and weighed about 130. His only previous jumping experience had been in playground meets. He had cleared 4-10 on one occasion, but was consistently clearing 4-6.

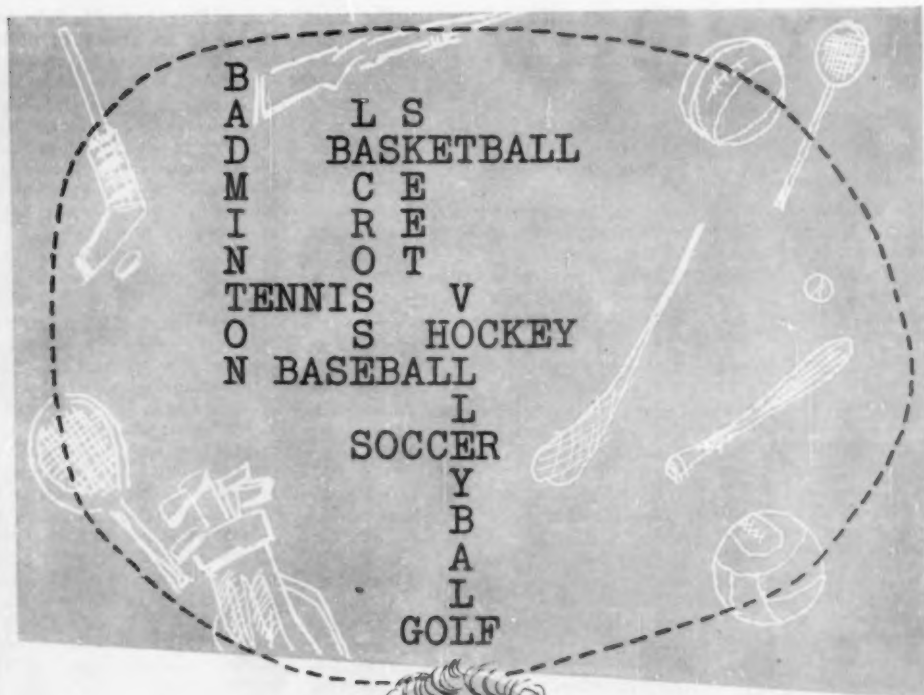
From the beginning, Coach Hegarty was impressed by two things about the boy. He had a nice light bounce at the take-off and he had an unquenchable enthusiasm for his event.

Like many another beginning jumper, Phil used the old scissor style jump. Coach Hegarty's prime concern was to bring the boy along without dulling his enthusiasm. So he decided upon a unique course. He encouraged Reavis to change to the straight Western roll in all of his practices, but allowed the boy to use the scissor style in competition! Those of you who envision Reavis starting training at heights well over 5' will be surprised to learn that Hegarty worked tirelessly on Reavis' form in the Western at 4-6.

During the winter of 1952, Reavis competed in six meets, most of them

Boston Globe Photo





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# DAILEY

**March.** Dick "floated" over 5-8 while practicing indoors. This gave us the first tingle over his possibilities.

**Early April.** First official jump of 5-8.

**Mid-April.** He broke his ceiling with a jump of 6¼. He did this under the most adverse conditions, proving his mental attitude. He was jumping against three good men (from the school I now coach) who "rode" him continuously. The more angry he got, the better he jumped.

That day and another on which we saw Allard of Fresno miss a new high school record in the state meet, convinced us that when a jumper is "hot" it isn't wise to aim at a precise new record. The meet officials should not, for example, take a lot of time and make a big fuss over raising the bar a fraction of an inch to set up a new record. They should just shove the bar up a notch or two and let the boy jump. The extra fraction of an inch won't make much difference and the longer you wait the higher it seems to get.

**Late April.** Dick and I went to see Dink Templeton during an Olympic Club track practice one Sunday morning, and gained many valuable tips from his words of wisdom. We decided to stay with the belly roll. Though probably the most difficult to consist-

ently perform correctly, it's the most efficient form.

**Early May.** As a high school freshman, just turned 16, Dick jumped 6½ to tie for sixth place in the state meet.

**Late June.** He jumped 6-11/16 in a city recreation track meet.

**1952-1953.** It was with sincere regret that I resigned my position as assistant track coach in charge of field events. However, as head track coach at Berkeley H. S. in the same league, I kept in frequent contact with Dick. Don Oakes, Hayward track coach, is now doing a fine job with him.

**Fall of 1952.** Dick participated in cross-country to strengthen himself.

**Feb. 1953.** At 6'2, 160 lbs., he was bigger, stronger and equal to the task of coming through in his soph year.

**Early March.** Cleared 6-2½ in practice.

**Late March.** Cleared 6½ in a meet.

**Late April.** Set a new conference record of 6-3¼.

**Early May.** Cleared 6-4¼ in the North Coast trials, listed in the interscholastic track and field manual as the best H. S. jump in the country that year.

**Late May.** During the Hollister Relays, after four hours of jumping competition, he again cleared 6-3.

**Late May.** In the state meet, he had a disappointing 6-1 jump due to worry over his foot extending beyond the standard while clearing the bar.

**1953-4.** More cross-country.

I had planned to publish this article

last spring, but was late in finishing it due to an attack of polio. At that time, I made the following prediction for the 1953-54 season:

"Dick will surpass his best of 6-4¼ but probably not much higher than 6-5. This year will probably bring more consistency at 6-3 or 4. Next year he should be consistent at 6-5 with a best of 6-6 or 7, and possibly break the H. S. record of 6-7¼".

Dick did not fail me. He made me look extremely good as a prognosticator.

**1954 Feb.** At 6'2¾ and 165 lbs., Dick faced his junior year with full realization of the job that lay ahead. But, more important, with the desire to do it successfully.

The greatest difficulty he faced was the feeling and expectation of observers that he should go consistently higher. A good jumper like Dick should and does make it look easy. But it requires height, spring, coordination, form, and intelligence, directed by a tremendous desire to excel and a willingness to work.

**March 1.** Alameda-Hayward meet, won at 6-5 1/16 (first time over 6-5, made every jump on first try, 6-5 1/16 on second try).

**March 8.** Berkeley-Hayward, 6-2½. **March 9.** Sequoia Invitational, won at 6-5½.

**April 17.** California Frosh-High School All-Stars, won at 6-5½.

**April 24.** Martinez Relays, won at (Continued on page 28)

# REAVIS

in the now nationally known Boston Metropolitan Track League. He was fortunate in his first indoor season in that he met poor competition. According to Coach Hegarty, that fitted in perfectly with his plans inasmuch as several successive wins built up the boy's confidence and maintained his enthusiasm.

His winning heights were hardly sensational, starting with one at 5 even, then 5-2, next at 5-4, then in succession, 5-5, 5-6, and 5-8. These victories were all won via the scissors jump.

Meanwhile, Phil's development as a Western roller was progressing slowly. His best practice heights with it fell about four inches short of his best with the scissors. Early entry dates prevented Coach Hegarty from entering Reavis in any of the big meets like the Northeastern Interscholastics and the Massachusetts State Meet.

It was in the final meet of the Met League season that Dick Hegarty first began to sense the real possibilities of his little jumper. In the 1952 G.B.I. Meet, Reavis was pitted against other sophomores

from Massachusetts high schools and proceeded to win handily with a leap of 5-8.

Here Coach Hegarty was watching for Phil's reaction to pressure. Though jumping against dozens of boys from some of the best track schools in Massachusetts, Reavis cleared the same height as the State Class A champion, Pollard of Newton High, in the senior division. The only jumper to go higher than Reavis that day was Win Puffer of Concord High, who defeated Pollard for the senior crown.

Reavis showed no remarkable progress during the spring of 1952, except that he now could attain the same heights with the Western roll as he could with the scissors. He won most of his dual meets with heights of about 5-7. He didn't place in the outdoor state meet, but he did clear 5-8 (using the Western). From then on, he never used the scissors again.

Phil began to blossom in his second year of high school competition, which began in January 1953. He was then about 5 feet 8½ tall and weighed about 135. The 16-year-old junior electrified the Met League by clearing 6-¾ in the first indoor meet of the year.

He won the B.A.A. Schoolboy Meet at 6-2, took Class A in the state meet at 6-½, but failed to break the Class A record of 6-1. He then won the New England championships at 6-1¼.

Reavis continued to win during the outdoor season of 1953, but, even more important, he added a little height and started his senior year at 5' 10, weighing 145 pounds. Then came the blow which may have prevented him from setting a new interscholastic record. Just as practice for indoor track was about to start, he suffered an attack of acute appendicitis. He underwent an operation and wasn't allowed to practice or jump until January '54.

Even then, Coach Hegarty would allow him to jump only high enough to clinch the points for Somerville. Not until the second of his Met League Meets was the boy allowed to try for any real heights. He had everybody's eyes popping as he set a new record of 6-3½. He reached the same height while setting a new B.A.A. schoolboy meet record. Two weeks later he went to 6-3½ to set a new state meet record. He followed this by winning the National A.A.U. schoolboy high jump (Continued on page 40)






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6-7, all the more remarkable since the standards read 6-10 with the lowest point measured 6-7.

**May 7.** A.C.A.L. Conference, won at 6-6½.

**May 14.** North Coast Division, won at 6-1 (in a wind storm).

**May 23.** North Coast Section, won at 6-4½.

**May 29.** State meet, won at 6-5½.

Prediction for 1955. Dick has shown consistency at 6-5. You might stretch a point and say he's consistently over 6-6 but must get used to the idea of 6-6 and having the bar at 6-6. (Actually, most of his jumps over the bar at 6-4 or 6-5 have been 6-7 and 6-8 jumps.)

I think that as senior in 1955 Dick will be consistently over 6-6, will clear 6-7 several times, will set a new interscholastic record, and will very possibly clear 6-8.

### HINTS TO BETTER JUMPING

The belly roll is theoretically the most efficient method of high jumping. You must remember that the diameter of the trunk is approximately six inches less from front to back than from left to right. Where the jumper lays out on his belly, he exploits this fact. To clear the same height with the western roll, the center of gravity must be raised about three inches more.

Of some importance, too, is the fact that in a face-down position (belly roll) the entire body needn't be at maximum height at any one time (as is usually the case with the western roll), since parts of the arms and legs are in better position to hang down. This may, of course, become a disadvantage.)

Though I'd agree that men of the Walt Davis type would probably do better with the western roll, I always give the belly roll a good try.

I feel that the following items have played an important part in Dick's success and can help others achieve their potential. The points under approach and takeoff can be applied to any form.

### THE APPROACH

Set out two markers (for the 3rd and 5th left foot marks from the takeoff) so that the approach may become automatic. Hit these two marks and then look over the bar. We use lime in an envelope (tearing off one corner) or a can of cleansing powder to make these marks.

Reasonable speed should be built up over a comfortable distance (Dick starts at about 35-40'), but speed only helps if it can be converted into upward motion. Bounding strides may help by stretching the muscles involved, making the jumper feel relaxed physically and mentally, and allowing for greater impact with the ground.

The path should be straight, at about

a 45° angle and so aligned that the highest point of the jump will be over the center of the bar (a chalk line may help). The coach can check by standing 8-10 yards from the crossbar, alternately in line at right angles to the bar.

### THE TAKEOFF

The takeoff should be far enough out to give the jumper a feeling of stretching, reaching, or floating. Slightly farther out for higher heights, until he starts to come down on the bar. The conventional arm's reach is too close for heights much over 6'.

When jumping well over 6', the takeoff should be 3½-4½' or even further out. On Dick's best jumps of 6-4 and over, he takes off 4-5' out.

Probably the most important single aspect of the jump is the contact of the takeoff foot with the ground. This is borne out by the success of Shelton of U.S.C., though he has a very slow approach and takes off very close to the bar, almost jumping straight up.

The controversy last year over the tumbler's approach to the high jump and his success at heights at least a foot over his own height\*, should serve to more clearly establish a good takeoff as the most important single aspect of this event.

This is based on the sound physical principal that for every action there must be an equal and opposite reaction. The tumbler "winds up" for this takeoff and his legs come down from a great height with terrific impact. So far, he has been compounding this "felony" by using the impact (reaction) of both legs.

The takeoff should be executed with a vigorous stamp of the takeoff foot. The more force (speed in this case) with which this foot hits the ground, the greater will be the raw height. We say, "Ram that takeoff foot into the ground." The body will be pushed away from the ground at whatever angle the body is inclined at the moment of impact.

We'd like the body, including the head, to be directly over the takeoff foot at right angles to the ground, so that the body will be pushed up but not into the bar—as happens whenever the jumper leans into the bar or dives as he takes off.

The horizontal motion of the run will be sufficient to carry the jumper "over" or "past" the bar—any leaning on the takeoff will only result in cutting off the top of the jump. This seems to be one of the common faults of belly rollers. The approach and takeoff have been Dailey's strong points thus far.

The jumper is also aided by a strong upward swing of his far arm, far leg, and temporarily his near arm. (For a jumper coming from the left side, the "near" is the left side, the "far" is the right side.)

The athlete should not lean into the bar or start his roll too soon, or he will cut off the top of his jump. He should aim high and think of jumping and floating, not of coming down. He

(Concluded on page 40)

\* Dickie Browning, U. of Illinois National AAU tumbling champ, has been perfecting a running forward hand spring, round off flip-flop approach, and a backward double sommersault over the bar, taking off from both feet.

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At Santa Ana, we believe that the key to a successful season lies in the development of a crack half-mile relay team. From such blessing, all goodness stems.

In our league, as in most leagues, the half-mile relay is the concluding event on the program, and it's often essential to win this race in order to bring home the championship.

A crack "4 x 220" team can win that big race. But that's not the entire story. Even more important is the fact that those four good 220 men can participate in the maximum number of events before the big race and thus score a lot of points for your team.

Usually, two of the speedy relay men can pick up a good number of points in the 100 and 220 sprints, another can win both the high and low hurdles, while the fourth member can perhaps cop the 440 and also place in the broad jump.

This is just a sample of what four fast relay men can do before joining forces for the final event.

## PRE-SEASON TESTS

Developing a crack half-mile relay quartet year after year calls for a lot of hard work. In our local high school, we run tests in all the boys' physical education classes. We test in six events: 50, 100, broad jump, high jump, 12-pound shot, and an easy 440. The results enable us to discover each boy's native ability and to encourage him to come out for the team.

Without these tests, we'd undoubtedly lose a lot of fine track prospects. But since this article is concerned with the sprints, we'll direct our thinking and writing toward the 220 dash prospects.

We believe in developing our boys

early in the season so that they can be used on some of our teams in The Santa Ana Relays. This meet is an early season affair designed to furnish competition for a large number of athletes. The program is as follows:

1:30—Shuttle Hurdle Race (four men, each 120-yard low hurdles).

1:45—Mile Race (eight men, 220 yards each).

2:10—Two-Mile Race (four men, 880 each).

2:40—Quarter-Mile Race (four men, 110 each).

2:50—Short Medley (four men, 110-220-440-880).

3:20—Half-Mile Race (eight men, 110 each).

3:35—Half-Mile Race (four men, 220 each).

4:00—Long Medley (four men, 220-440-880-mile).

4:30—Mile Race (four men, 440 each).

This program is a wonderful track stimulator for Southern California, and 40 to 50 schools compete every year. There are three divisions, with the enrollment of each school determining its classification. Most of the schools enter all nine races in its division.

Boys like lots of competition and here a coach can really start developing a large number of sprinters, hurdlers, and distance men. In the above program, you can sprint eight boys (110 each) in one of the races and eight boys (220 each) in another race.

Low hurdling is a must for all our sprinters. The reason is simple. To low hurdle in championship style, a boy must develop an even stride. He must use a good vigorous arm action and learn to bring his knees rather high and then bring them down fast.

After quickly stepping over a hur-

dle, the boy must drive straight ahead for the next barrier. He must learn to take those seven necessary steps as fast as possible, and must develop determination, concentration, and courage.

Our low-hurdling practice is performed over an 80-yard course, and a stop-watch is used to keep the boy informed of his progress. Mixed in with the low-hurdling work is a lot of fast 50's. Most of this work is done individually and again the boy's time is given after each dash.

Not all sprinters can become good low hurdlers, but we've found that 80% of them make excellent low hurdlers. In our Relay meet, our low-hurdle team is usually composed of our four fastest sprinters.

Summary: Fast 50's and fast 80-yard low hurdles tend to develop good sprinters.

## LEARNING TO RUN A 220

Not every good 100-yard dash man can become a good 220 sprinter. But our records show that with proper induction, 80% of our century sprinters can become reliable 220 runners, at least good enough to become useful members of the half-mile relay team.

After about three weeks conditioning (weather permitting), we're ready to institute 220-yard dash induction work. This involves a 220 for each boy around the one curve. Each man runs alone, while the other boys watch and pick up coaching suggestions.

The first boy to run is an experienced member of last year's relay team. The coach instructs him to run the first 100 yards at best speed, then coast (float, glide, or free-wheel) the next 8 or 10 steps, and then sprint again as best he can—carrying this sprint to the finish, if possible.

If the boy cannot carry his sprint to the finish, we tell him to maintain good sprinting form, stressing a good knee lift. We don't time the boy this day.

To develop good finishing form, each boy is instructed to stride about 300 yards at  $\frac{3}{4}$ th effort at the end of his daily workout. We like to have our boys finish this

**By PINKY GREENE**

*Coach, Santa Ana (Calif.) High School*

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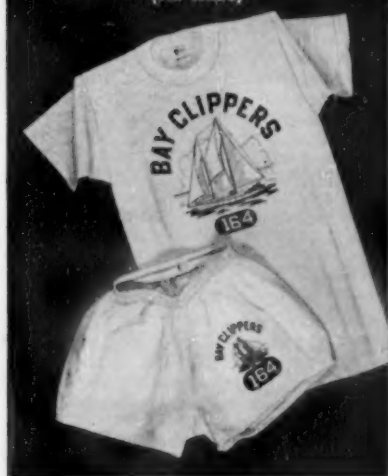
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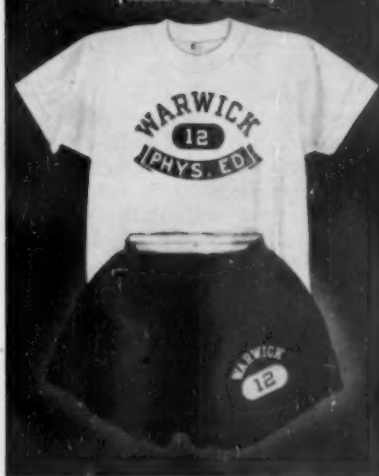


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first induction race without feeling too tired, and we instruct them accordingly. We give them an easy day and then more 220 induction work.

In about two days, we're ready for 220 trial races. Every boy runs alone and is timed. And to simulate meet conditions, he carries a baton and is given a 10-yard running start into the regular 220-yard starting mark. The eight fastest boys will probably make up the (8 x 220) team for the Santa Ana Relays.

During this induction training and timed 220 race, the coach, with the aid of a megaphone, directs encouraging remarks and instructions at each competitor. After the 220 trials, we like to gather the boys in a group and offer constructive criticism, dole out compliments, and recount what former stars did in their trial races and what progress they made before graduating.

At this time, a little chat on training, food, rest, socializing, and the like also does considerable good.

It's surprising how little the boys know about food values, and a talk on the values of good eating habits is very much in order.

### MOTIVATION DEVICES

Performers in any field of endeavor need motivation. Tradition is a wonderful tool in this respect. Your athletes love to read about the great performers of former years and then strive to emulate them. We try to capitalize on this fact.

In 1938 it was Santa Ana's good fortune to produce an outstanding half-mile relay team that won many of the big Southern California meets and then went on to cop the state crown. In our Citrus League for the five consecutive years between 1938 and 1942, the team winning the half-mile relay also won the League title. In most of these meets, the championship hinged on the outcome of this final event (half-mile relay).

This established fact gave the writer the idea of preparing a poster for bulletin board display. This was started in 1940 and has worked out beautifully in exciting the boys' interest and stimulating them to greater achievement.

The poster reads as follows:

Successful development of 220-yard runners usually is conducive toward a fast and dependable half-mile relay team. Usually in any championship league meet, the team that wins the half-mile relay race usually wins the CHAMPIONSHIP.

Endeavoring to prove the above statement, we show you below the results of the half-mile relay races in our Citrus and Sunset League Championship Meets.

### HALF-MILE RELAY WINNERS

Year	League Champion	880 Relay Winner	Season's Best Time
1938	Santa Ana	Santa Ana	1:29.8
1939	Santa Ana	Santa Ana	1:30.1
1940	Pomona	Pomona	1:31.7
1941	Santa Ana	Santa Ana	1:32.6
1942	Santa Ana	Santa Ana	1:32.3
1943	Santa Ana	Santa Ana	1:33.7
1946	Santa Ana	Santa Ana	1:30.1
1947	Santa Ana	Fullerton	1:33.1
1948	Santa Ana	Fullerton	1:32.1
1949	Newport Harbor	Fullerton	1:33.3
1950	Newport Harbor	Orange	1:33.4
1951	Santa Ana	Santa Ana	1:33.4
1952	Santa Ana	Santa Ana	1:30.8
1953	Santa Ana	Santa Ana	1:29.9
1954	Santa Ana	Santa Ana	1:29.1

**National Honor Role.** In 1938, 1939, 1946, 1953, and 1954, your Santa Ana High School half-mile relay team received high track honors. Congratulations! See adjacent posted bulletin for the names of these boys. Maintain TRADITION.

It doesn't take blazing speed to become a good relay team member, but it does require regular and diligent training. It also takes intelligent racing judgment. If the relay team desires to exchange the baton deftly and efficiently, the four team members must PRACTICE passing the baton.

Normally, any boy who can run the 100-yard dash in 11 seconds or faster can, with AMBITION, become a very useful member of a good, reliable half-mile relay team. The four team members, if RELIABLE, must make three very efficient baton passes. This takes practice.

Yes, a good consistent half-mile relay team is very convenient in a close track meet, and in 1938, 1939, 1942, 1951, and 1952 our Saints won League Track Championships when the Championship depended upon the 880-yard relay, the concluding event on the program... because the "4 x 220 boys" COULD AND DID COME THROUGH!

P.S. #1. Let's develop a fast half-mile relay team each year.

P.S. #2. Perhaps you, too, can make the NATIONAL HONOR ROLL.

ONE of those fabulous California track coaches, Reece H. (Pinky) Greene has been coaching at Santa Ana (Calif) H. S. since 1933. In that time, he has produced many National Honor Roll champions (including Bill Swiss-helm, who set a new national record in the low hurdles last year), many half-mile relay champions, and no fewer than 13 league championships, including two Southern California crowns. Prior to his arrival at Santa Ana, he coached at Central H. S., Sioux City, Iowa, where he turned out a state championship basketball team. He also coached basketball at Santa Ana until 1937, and currently coaches the sophomore football team (besides his track work).



**ALABAMA**  
Birmingham Public Schools, Birmingham  
Gadsden City Schools, Gadsden  
State Teacher's College, Jackson  
Marion Institute, Marion  
University of Alabama

**ARIZONA**  
Globe High School  
Phoenix High School  
Phoenix Public Schools

**ARIZONA**  
Arvin High School  
U. of Calif.  
Long Beach  
Alhambra  
Oakland Public  
Point Loma  
San Fernando High  
Abraham Lincoln

**CALIFORNIA**  
Bible United High School, Brea  
Union High School, Lodi  
Center Consolidated School, Center

**CONNECTICUT**  
Southington High School, Southington  
Windham High School, Windham

**DELAWARE**  
Tower Hill School, Wilmington

**DISTRICT OF COLUMBIA**  
Miller Jr. High School, Washington  
Ranger Jr. High School, Washington

**FLORIDA**  
Maitland High School, Daytona Beach  
Lakeland High School, Lakeland  
University of Florida, Gainesville  
U.S.N. Air Station, Pensacola  
St. Augustine Gym, St. Augustine

**GEORGIA**  
Atlanta Public Schools, Atlanta  
R.O. Inf. Cen. Vld. House, Ft. Benning

**IDAHO**  
N. Idaho Jr. College, Coeur d'Alene  
Ind. School Dist. No. 116, Grace  
High School, Montpelier  
Idaho State College, Pocatello

**ILLINOIS**  
St. Mary of Cells, Berwyn  
South, Ill. Normal Univ., Carterville  
Lincoln High School, E. St. Louis  
St. Anthony of Padua Church, E. St. Louis  
Rush College, Galesburg  
Thornton Twp. High School, Elmhurst  
St. Charles High School, Elmhurst

**KENTUCKY**  
Cole's Jr. High School, Ashland  
Berea College, Berea  
Centre College, Danville  
Estill County High School, Irvine  
Camargo High School, Mt. Sterling

**LOUISIANA**  
Baton Rouge  
Baton Rouge  
Baton Rouge  
Baton Rouge  
Baton Rouge

**MISSISSIPPI**  
U.S. Mar. Mar. Cadet Sch., Pass Christian  
Pearl River Jr. College, Poplarville

**MISSOURI**  
Brentwood High School, Brentwood  
Southeast Mo. State Coll., Cape Girardeau  
Wm. C. Bryant School, Kansas City  
Bishop DuBourg High School, St. Louis  
DeAndre's High School, St. Louis  
St. Anthony High School, St. Louis  
Washington University, St. Louis  
Cent. State Teachers College, Warrensburg  
Webster College, Webster Groves

**MONTANA**  
Senior High School, Billings  
School of Mines, Butte  
High School, Helena  
School of Mines, Helena  
Central High School, Great Falls

**OHIO**  
Akron Public Schools, Akron  
Grandview High School, Columbus  
Euclid St. High School, Cleveland  
Canton Public Schools, Hamilton  
Miami University, Oxford

**OKLAHOMA**  
U. S. Army, Fort Sill, Lawton  
University of Oklahoma, Norman  
Long Public Schools, Muskogee

**OREGON**  
High School, Baker  
State College, Corvallis  
High School, Nyssa  
Schools, Parkrose  
& Lout Schools, Portland

**PENNSYLVANIA**  
College, Gettysburg, Gettysburg  
St. Grounds High, E. Stroudsburg  
State Teachers College, Mansfield  
Lansley High School, Pittsburgh

**SOUTH CAROLINA**  
San Claire High School, Columbia  
Brewer High School, Greenwood  
T.N.C.A., Greenwood  
T.N.C.A., Rock Hill

**SOUTH DAKOTA**  
South Dakota State College, Brookings  
City Auditorium, Chamberlain

**TENNESSEE**  
Dandridge High School, Dandridge  
Seardon High School, Knoxville  
Central High School, Murfreesboro  
David Lipscomb College, Nashville  
Franklin Co. High School, Wipacater

**TEXAS**  
Amarillo Jr. College, Amarillo  
San Houston Jr. High School, Amarillo  
Burkhardt High School, Burkhart  
W. B. Ray High School, Corpus Christi  
Rice Institute, Houston  
Kilgore Public Schools, Kilgore  
Levelland High School, Levelland

**UTAH**  
High School, Hurricane  
High School, Ogden  
High School, Panguitch  
High School, Salt Lake City

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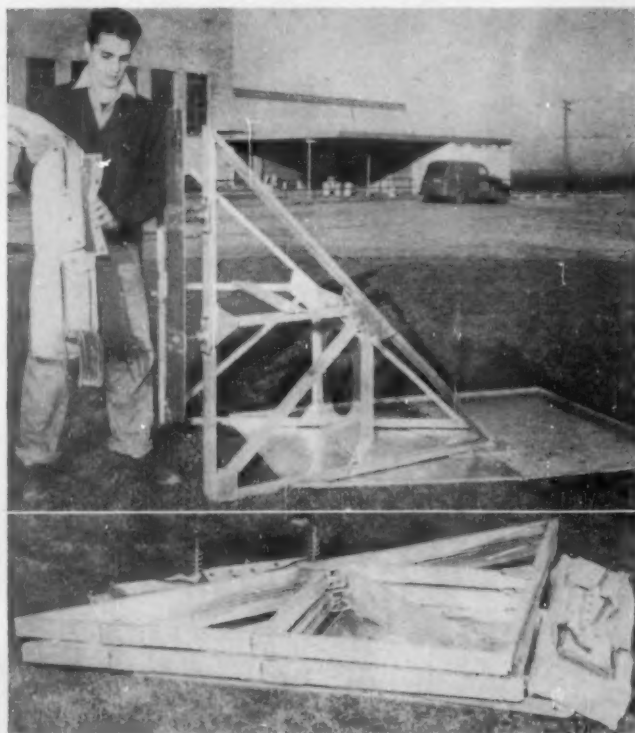
• **FACE PROTECTOR.** A new Jet-Snap feature facilitates the use of the Rawlings' Safe-T-Vue face protector. It offers the easiest, speediest, and most efficient way of snapping the protector onto the helmet, enabling the player to attach or remove the protector in a few seconds right on the field of play!



• **KOLITE BALL.** Besides an improved cover surface allowing for more positive non-slip grip, The Seamless Rubber Co. Kolite balls have "plateaued" improved pebbling and wider grooving—plus Kant-leek valve, nylon winding, and Butyl bladders.



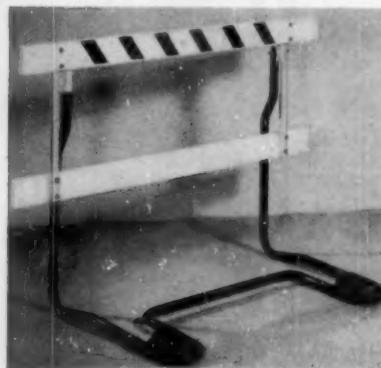
• **FACE GUARD.** The Ted Sowle Guardsman Face Guard manufactured by Athletic Products Co. offers unsurpassed protection for nose, teeth, jaw, and facial area. Light in weight, simple to install on any type headgear, cool, comfortable, well-ventilated, won't tip or tilt, unimpaired visibility, it comes in a non-glare neutral color and can be painted to match team colors.



• **PORTABLE FOOTBALL CHARGING SLED.** Constructed entirely of aluminum and steel, Port-a-Bloc readily disassembles in about 13 minutes and weighs about 144 lbs. Long-lasting stainless steel coil springs take shock. Pads sturdily built with hair felt filler 4" thick, leather lining, heavy white duck covering, heavy duty industrial zippers—are removed and put on in a matter of seconds. Can be transported to camp and away-games for pre-game warm-up; easily stored and won't rust. A rider makes it ideal for senior high, college, and pro. Developed by Ball-Hale Mfg. Co. and Aluminum Company of America.



• **RED CROSS TAPE.** Johnson & Johnson's controlled tension adhesive tape offers greater economy through a new winding process that actually makes the tape unwind progressively easier from beginning to end!



• **SAFETY HURDLE.** Gill's new national high school hurdle is of rugged tubular steel construction. Welded stationary weights give a pull over of 8 lbs. at 2-6 ht. and 6 lbs. at 3-3 ht. Heights are maintained by two adjustable spring steel snap locks. Top edge of pine gates are rounded to avoid abrasions.



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# Wheat Germ Oil, the "Wonder" Fuel

By THOMAS K. CURETON, Jr.  
Professor, University of Illinois

**O**VER the past five years, the Physical Fitness Research Laboratory has been meticulously investigating the possibilities of wheat germ oil as a nutritional supplement during hard physical training.

Previous experimentation with nutritional supplements designed to increase work performance or physical efficiency has proved extremely disappointing. And doubtful experiences with gelatin, vitamin B<sub>1</sub>, B<sub>12</sub>, B complex, vitamin E, and basic (alkaline) diets have created a deep-seated opposition to such supplements in scientific circles. The evidence is never "adequate," the samples of subjects are never "random," and psychological influences are never completely controlled.

Nevertheless, our work with wheat germ oil should be of deep interest to coaches and physical education instructors. Previous reviews of such studies have been published by Karpovich,<sup>1</sup> Henschel,<sup>2</sup> and Keys.<sup>3</sup>

## CRITERIA AND FEEDING

To determine whether the wheat germ oil has been helpful or not, we have used timed bicycle ergometer rides, timed treadmill runs at a standardized pace and slope, and certain non-performance tests such as the T-wave of the electrocardiogram (highest of the pre-cordial leads), the heartograph, Schneider Test, and "all-out" exercises with oxygen intake and oxygen debt determinations.

An important point is that three types of tests have been used: (1) All-Out Performance Tests, (2) Standardized Sub-Maximal Work Tasks, and (3) Quiet (naive) Non-Performance Tests.

In general, wheat germ oil in the fresh non-cooked state has been used in capsulated form in doses of 20 (3 minim) gelatin capsules. This is equivalent to one teaspoonful. In

some experiments, as much as 96 capsules per day were given over 12 weeks.

More improvement has been obtained from wheat germ oil than from corn oil with synthetic vitamin E, or cottonseed oil. Wheat germ has provided changes as good in reaction time, but not as good in endurance or in the circulatory measures which correlate fairly high with endurance.

We do believe that perhaps the most expeditious time to feed the wheat germ oil is right after the physical workout, when the stomach is empty, and when the capillary circulation through the heart, muscles, and blood vessels is as good as possible.

## SUPPLEMENTARY TO EXERCISE

Physical training improves the circulation, increases capillarization of the muscle and heart tissue, increases the stroke volume, blood flow, and suppleness of the big trunk and limb arteries, and dilates the capillary beds, especially in the lungs and in the worked muscles.

These effects are usually attributable to exercise alone. But a food supplement, administered just after the periods of progressive exercise, seems to be unusually effective in improving both physical capacity and certain associated physiological responses. Poor nutrition seems to be associated with the lack of such cardiovascular and muscular training which facilitates assimilation and utilization of the oil and all of its ingredients.

In this study and others of different design, the wheat germ oil supplement produced very small gains or none at all unless combined with physical training. This made it appear at first that the improvements were due wholly to the exercise. After several types of experiments, however, the combination of physical training with simultaneous use of the wheat germ oil produced a consistently superior effect than the intake of wheat germ oil alone.

## TYPES OF EXPERIMENTS

The first experiment was in 1949 and the results are given in a thesis

by Forr.<sup>4</sup> Three sub-groups of young men living in a fraternity house were tested, matched, and then fed over a period of 12 weeks. One group averaged 41 (175 mg., 3 minim) capsules per day of fresh wheat germ oil; another took 150 mg. weekly of synthetic vitamin E (alpha tocopherol acetate), capsulated in corn oil and calculated to balance the vitamin E in the wheat germ oil; and the third group took placebos containing cottonseed oil. None of the boys knew exactly what they were taking, "just vitamins."

The T-wave of the wheat germ oil group improved twice as much as in the cottonseed oil group, while no positive effect was noticed in the synthetic vitamin E group. Visual reaction time was improved four times as much in the wheat germ oil and cottonseed oil groups than in the synthetic vitamin E group. The basal metabolic rate was slowed in both the wheat germ oil and cottonseed oil groups, with no change in the synthetic vitamin E group.

A swimming group composed of three sub-groups of nine men each was simultaneously studied, and the results were almost exactly the same on wheat germ oil and metabolism. But swimming slowed the visual reaction times of all of these sub-groups.

The next experiment was done in 1950-51. Six experimental subjects were tested at ground level in an Army Air Force decompression chamber, then the tests were repeated at 10,000 feet simulated altitude. A month was devoted to stabilizing the tests and securing "reliability."

Also tested were three control subjects who did not take the intensive physical conditioning program. The six experimental subjects were trained hard for 12 weeks until they were no longer improving on an all-out bicycle ride or on the Brachial pulse wave test or Schneider Test. In short, a plateau had been reached. For the next six weeks, the experimental subjects were fed wheat germ oil, 20 (3 minim capsules per day). Then they were re-tested.

On the bicycle all-out test, the initial riding times averaged 247.8 secs., improved over the 12 weeks of hard training to 309.2 secs., then improved to 365.3 secs. during the six weeks that wheat germ oil was fed. The control subjects averaged 165.6 secs. on the initial test, 136.8 secs. at the end of 12 weeks, and 172.8 secs. after the next six weeks. From the first to the last tests, they improved just 3.74%, whereas the experimental subjects on wheat germ oil improved 24.8% during the 12 preliminary

(Continued on page 37)

<sup>1</sup>Karpovich, P. V.: "Ergogenic Aids in Work and Sport," Supplement to the Research Quarterly, 12: 432-450, May 1941.

<sup>2</sup>Henschel, Austin: "Diet and Muscular Fatigue," The Research Quarterly, 8: 280-285, October 1942.

<sup>3</sup>Keys, Ancel: "Physical Performance in Relation to Diet," Federation Proceedings, 2: 164-167, September 1943.

<sup>4</sup>Forr, William A.: "The Effects of Wheat Germ Oil and Vitamin E on Physical Fitness," M. S. thesis, Physical Education, U. of Illinois, 1950, pp. 92.

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**125 GENUINE AUTOGRAPHED LOUISVILLE SLUGGER—POWERIZED.** Natural Ash White Finish. Turned from choice, open-air-seasoned White Ash. Genuine Autographed models of the twenty-five sluggers listed below comprise the No. 125 line. An assortment of not fewer than six different models is guaranteed to each carton of one dozen. Packed 2/32", 5/34", and 5/35" bats in each carton. Shipping weight, 27 pounds. **Each \$3.80**

**MODELS:** Richie Ashburn, Bobby Avila, Yogi Berra, Joe DiMaggio, Walt Dropo, Ferris Fain, Nelson Fox, Bill Goodman, Rogers Hornsby, George Kell, Ralph Kiner, Ted Kluszewski, Whitey Lockman, Mickey Mantle, Ed Mathews, PeeWee Reese, Jackie Robinson, Al Rosen, Babe Ruth, Hank Sauer, Al Schoendienst, Duke Snider, Vern Stephens, Mickey Vernon, Ted Williams.

**125S SPECIAL AUTOGRAPHED LOUISVILLE SLUGGER—POWERIZED.** (Not Illustrated). Quality and finish identical to No. 125 but turned to slightly smaller dimensions for the particular requirements of High School, Prep School, Babe Ruth League, Pony League, and other teen-age players. Listed below are the Autographed models in the 125S group. An assortment of not fewer than six different models is guaranteed to each carton of one dozen. Packed 3/32", 5/33", and 4/34" bats in each carton. Shipping weight, 26 pounds. **Each \$3.80**

**MODELS:** Joe DiMaggio, Ferris Fain, George Kell, Ralph Kiner, Mickey Mantle, Ed Mathews, Jackie Robinson, Babe Ruth, Hank Sauer, Duke Snider, Vern Stephens, Ted Williams.



**125 EBONY FINISH GENUINE AUTOGRAPHED LOUISVILLE SLUGGER—POWERIZED.** Turned from choice, open-air-seasoned timber. Rich Ebony Finish with gold branding and beautiful, full-color picture decals of players listed below. Six different models are guaranteed to each carton of one dozen. Packed 2/32", 5/34", and 5/35" bats in each carton. Shipping weight, 27 pounds. **Each \$3.80**

**MODELS:** Ferris Fain, George Kell, Ralph Kiner, Mickey Mantle, Jackie Robinson, Ted Williams.

**43 ASH FUNGO. GENUINE LOUISVILLE SLUGGER—POWERIZED.** (Not Illustrated). Turned from select, open-air-seasoned White Ash. Natural Finish. Each carton of one dozen contains three (34") infield and nine (37" and 38") outfield fungoes. Shipping weight, 20 pounds. **Each \$3.80**



**150S SPECIAL GRAND SLAM.** Natural White Finish. Turned from select White Ash. Patterned after the original models of the Famous Sluggers whose names they bear, but turned to slightly smaller specifications for the particular requirements of High School, Prep School, Babe Ruth League, Pony League, and other teen-age players. Six different models guaranteed to each carton of one dozen. Lengths 3/32", 5/33", and 4/34" bats in carton; shipping weight, 25 pounds. **Each \$3.00**



**110 MAJOR LEAGUE—"It's a Louisville."** Natural Ash White Finish. Turned from high quality, thoroughly seasoned White Ash. Supplied in same assortment of famous sluggers models listed under No. 125 (above), with six different models guaranteed to each carton of one dozen. Lengths 2/32", 5/34", and 5/35"; shipping weight, 27 pounds. **Each \$2.80**



**140S SPECIAL POWER DRIVE.** Natural White Finish. Turned from fine White Ash. Patterned after the original models of the Famous Sluggers whose names they bear, but turned to slightly smaller specifications for the particular requirements of High School, Prep School, Babe Ruth League, Pony League, and other teen-age players. Six different models guaranteed to each carton of one dozen. Lengths 3/32", 5/33", and 4/34" bats in carton; shipping weight, 25 pounds. **Each \$2.50**

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No. 125S, No. 150S, No. 140S, and No. 130S (also the various Junior and Little League numbers) are approved for BABE RUTH LEAGUE and PONY LEAGUE play. These numbers are designed expressly for teen-age players.

**HILLERICH & BRADSBY COMPANY, INC., LOUISVILLE, KENTUCKY**

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## LOUISVILLE SLUGGER BASEBALL BATS



**11B BIG LEAGUER.** Black finish with white tape grip. An assortment of famous sluggers' models in each carton of one dozen. Lengths range from 32" to 35"; shipping weight, 26 pounds. **Each \$2.00**



**14W SAFE HIT.** Finished in Natural Ash White and supplied in an assortment of famous sluggers' models, with six different models in each carton of one dozen. Assorted lengths from 32" to 35"; shipping weight, 26 pounds. **Each \$2.00**



**130S SPECIAL SAFE HIT.** Turned from Ash with rich Dark Maroon Finish. Patterned after the original models of the Famous Sluggers whose names they bear, but turned to slightly smaller specifications for the particular requirements of High School, Prep School, Babe Ruth League, Pony League, and other teen-age players. Six different models guaranteed to the carton of one dozen. Lengths 3/32", 5/32", and 4/34" bats in carton; shipping weight, 25 pounds. **Each \$1.85**



**9 LEADER.** Light Brown Finish. Assorted famous sluggers' models. Assorted lengths, from 32" to 35"; shipping weight, 26 pounds. **Each \$1.40**



**125LL GENUINE AUTOGRAPHED LITTLE LEAGUE LOUISVILLE SLUGGERS.** Large size Junior bats. Turned from select open-air-seasoned White Ash and Hickory. Each carton of one dozen contains approximately half with Natural White Finish and half with Antique Finish. Autographs of Al Rosen, Jackie Robinson, Mickey Mantle, Ralph Kiner, Babe Ruth, and Ted Williams. Packed 1/29", 4/30", 5/31", and 2/32" bats in each carton. Shipping weight, 23 pounds. **Each \$2.85**



**125J GENUINE AUTOGRAPHED LITTLE LEAGUE LOUISVILLE SLUGGER.** Medium size Junior bat. Turned from select open-air-seasoned Ash and finished in Natural Ash White. Autographs of Al Rosen, Jackie Robinson, Mickey Mantle, Ralph Kiner, Babe Ruth, and Ted Williams. Lengths 1/29", 4/30", 5/31", and 2/32". Shipping weight, 19 pounds. **Each \$2.00**



**JL LITTLE LEAGUE "It's a Louisville."** Large size Junior bat with attractive Ebony Finish and gold branding. Each bat contains the name of one of these famous hitters: Al Rosen, Jackie Robinson, Mickey Mantle, Ralph Kiner, Babe Ruth, and Ted Williams. Lengths 1/29", 4/30", 5/31", and 2/32". Shipping Weight, 23 pounds. **Each \$1.85**



**J2 LITTLE LEAGUE.** Large size Junior bat. Light Brown Finish. Each bat branded with name of one of these famous hitters: Al Rosen, Jackie Robinson, Mickey Mantle, Ralph Kiner, Babe Ruth, and Ted Williams. Lengths 1/29", 4/30", 5/31", and 2/32". Shipping weight, 23 pounds. **Each \$1.40**



# BASEBALL BATS



**125Y OFFICIAL LOUISVILLE SLUGGER SOFTBALL MODEL 12.** For the consistent hitter, a small barreled bat with gradual taper to small grip. Antique Finish. Finest selection of Second-Growth Ash and/or Hickory. One dozen to carton, 6/33" and 6/34"; shipping weight, 19 pounds **Each \$3.00**



**125W OFFICIAL LOUISVILLE SLUGGER SOFTBALL BAT.** Assortment of popular models packed in carton of one dozen. Turned from select Ash and/or Hickory, and Powerized. Finished in Natural Ash-White. Lengths, 6/33" and 6/34"; shipping weight, 23 pounds **Each \$2.75**



**125B OFFICIAL LOUISVILLE SLUGGER SOFTBALL BAT.** A splendid assortment of models that will meet requirements of the various types of hitters. Red Maroon Finish. Turned from select Ash and/or Hickory, and Powerized. One dozen in carton, 6/33" and 6/34"; shipping weight, 22 pounds **Each \$2.75**



**125C OFFICIAL LOUISVILLE SLUGGER SOFTBALL MODEL 8.** "Fast-Swing" Model for hitting fast pitching. Bottle-shaped large barrel that tapers quickly to small grip. Natural White Finish. Turned from select Ash and/or Hickory, and Powerized. One dozen to carton, 6/31" and 6/32"; shipping weight, 23 pounds **Each \$2.75**



**250B OFFICIAL LOUISVILLE SLUGGER "BLACK BETSY" ASSORTED SOFTBALL MODELS.** A splendid variety of models—answers full team requirements. Ebony Finish. Turned from select Ash and/or Hickory. One dozen in carton, 6/33" and 6/34"; shipping weight, 22 pounds **Each \$2.75**



**125T OFFICIAL LOUISVILLE SLUGGER SOFTBALL MODEL 6.** For heavy hitters—a bottle-shaped model with large barrel, tapering quickly to a medium grip. Natural White Finish. Turned from select Ash and Powerized. One dozen to carton, 6/33" and 6/34"; shipping weight, 24 pounds **Each \$2.75**



**250C OFFICIAL LOUISVILLE SLUGGER SOFTBALL MODEL 8.** "Fast-Swing" Model for hitting fast pitching. Bottle-shaped—large barrel that quickly tapers to small handle. Ebony Finish. Turned from select Ash and/or Hickory and Powerized. Each carton, 6/31" and 6/32". Shipping weight, 23 pounds. **Each \$2.75**



**125L OFFICIAL LOUISVILLE SLUGGER SOFTBALL MODEL 1.** For girl hitters. A small barreled bat with gradual taper to a small grip. Natural White Finish, Ash and Powerized. One dozen in carton, 33" length. Shipping weight, 18 pounds **Each \$2.75**



**200A OFFICIAL LOUISVILLE SLUGGER SOFTBALL BAT.** Supplied in assorted softball models. Finished in Brown Antique and Powerized. Turned from high-quality Ash and/or Hickory. One dozen to carton, 31" and 32" lengths; shipping weight, 18 pounds **Each \$2.30**



## SOFTBALL BATS

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**50 OFFICIAL SOFTBALL BAT.** Brown Finish. One dozen assorted models to carton, 6/33" and 6/34"; shipping weight, 21 pounds **Each \$1.00**

(Continued from page 36)

weeks of training and 47.4% over the entire 18 weeks!

This whole experiment was repeated by testing at 10,000 feet simulated altitude. The results were very similar. The experimental subjects improved from 147.8 to 239.8 secs. in the first 12 weeks (62.3%), then to 263.5 secs. (78.3%) in the next six weeks during which wheat germ oil was fed.

Two other groups lost efficiency rather than improved after 12 weeks of hard training, and the results were surprising to us.

The Schneider Test and T-wave of the ECG gave very similar results. Favorable results for wheat germ oil were shown on the performance all-out test as well as on the naive standardized cardiovascular tests.

It isn't easy to improve the T-wave, but during the 12 weeks of pre-training the T-wave improved 1.12 mm., then during the six weeks of wheat germ oil feeding improved 2.90 mm., whereas the standard errors of measurement were  $\pm 0.724$  mm. The controls averaged a loss of 0.13 mm. in the first 12 weeks and a further loss of 1.54 mm. during the last six weeks. The data are in theses by Smiley,<sup>8</sup> White,<sup>9</sup> and Susic.<sup>7</sup>

#### EXPERIMENTS WITH TEAMS

Two experiments were conducted with athletic teams in 1952 (swimming and wrestling teams at the U. of Illinois). While the results weren't strongly in favor of wheat germ oil, they weren't against it either. Two conditions worked against the experiment. First, a losing season greatly decreased the interest in training. And, second, the athletes were the only experimental subjects to be fed the wheat germ oil for as short a period as four weeks.

The experiment with the varsity swimming team matched two groups of 7 men each. One group was on 20 x 3 minim (wheat germ oil) capsules daily, containing about 8.4 mg. of tocopherol per day. The other group was fed placebos (duds) containing an equal amount of vitamin E in cottonseed oil.

The group on wheat germ oil raised the basal metabolic rate an average of 14.5% while the cottonseed oil group significantly reduced the basal metabolic rate by 14.5%.

In the 100-yard drop-off test for swimming endurance, the wheat germ oil group made a gain of 5.15% while the matched group on cottonseed oil showed a loss of 1.69%. The data are in the thesis by Marx.<sup>8</sup>

<sup>8</sup>Smiley, William A.: "Variations on a Bicycle Ergometer Test with Altitude, Training and a Dietary Supplement." M.S. thesis, Physical Education, U. of Illinois, 1951, pp. 91.

<sup>9</sup>White, C. H.: "The effect of Physical Training and a Dietary Supplement on the Schneider Index." M.S. thesis, Physical Education, U. of Illinois, 1951, pp. 96.

<sup>7</sup>Susic, Steve: "The Effects of Training and a Dietary Supplement on the T-Wave of the ECG." M.S. thesis, Physical Education, U. of Illinois, 1953, pp. 53.

<sup>8</sup>Marx, Elzer I.: "The Effect of a Dietary Supplement on Varsity Swimmers." Urbana: M.S. thesis, Physical Education, 1952, pp. 40.

## Extensive experimentation indicates that wheat germ oil increases the athlete's physical efficiency

The varsity wrestlers were matched in three groups. One of these groups was a control group which received neither a dietary supplement nor training. The second group was fed a supplement of wheat germ oil daily for four weeks, while the third group was fed synthetic vitamin E in cottonseed oil. Both these latter groups were pre-trained for six weeks, so that the initial effects of physical training would be eliminated. The supplement would, if effective, cause a "pick-up" if needed, compared to the groups which did not get it.

Both the wheat germ oil group and the synthetic vitamin E in cottonseed oil group improved more than the control group without supplement or training. The groups taking the supplements were better in the 5 min. Step Test by 23.6% (WGO) and 21.0% (£ T in cottonseed oil), and a loss of 2.83% for the controls. In the all-out treadmill run the gains were 6.12% (WGO) and 25.25% (£ T in cottonseed oil), and a loss of 25.72% for the controls.

In the breathholding test, the gains were 68.1% (WGO), 75.5% (£ T and cottonseed oil), compared to -54.9% for the controls. In the Composite Score 5-Item Cardiovascular Test, the gains were 18.6% (WGO), 66.0% (£ T in cottonseed oil), compared to -19.68% for the controls.

In the heartograph, the gains were 10.07% (WGO), 9.67% (£ T in cottonseed oil), compared to a loss of 12.38% in the controls. The T-wave of the ECG and the Schneider Test lost somewhat compared to the non-exercised controls, possibly indicating a type of nervous fatigue. The data are in the thesis by Vohaska.<sup>9</sup>

(The symbol, £, in the above paragraphs connotes the Greek letter, "alpha," and has a specific meaning, as used with Alpha Tocopherol Acetate.)

#### ALDERSON AND THOMPSON

The stories of Jody Alderson and Willard Thompson can be cited as object lessons on the possibilities of wheat germ oil.

Jody had been a good 100-yard dash swimmer for several years. She swam 1:07.0 in the 100 m. trials for the 1952 Olympics and recorded 1:06.7 in the semis at Helsinki. In the finals, she swam well for 75 yards but gave out in the last 25 m. to finish fifth in 1:09. In 1953, she swam 1:09.1 in the AAU title meet at Portland, Ore., where she was beaten by Judy Roberts and Shelley Mann. All year long she exhibited a persistent tendency to lose

out in the last 25 to 30 yards of the race.

In February of 1954, upon the advice of her coach, she appealed to me for help in building endurance for the last part of her race. After testing her in our full series of physical fitness tests, I put her to work on hard endurance exercises: flutter kicks on front and back, pulley weights, medicine balls, push-ups, pull-ups, squat jumps, and runs in place followed by breath-holding. She also did some endurance running. We gave her a daily supplement of 20 (3 minim) capsules of wheat germ oil, and had her swimming in daily pool workouts, sometimes with the boys.

After three months of this type of training, Jody swam 58.5 in the 100-yard finals at Daytona Beach, Fla., gaining her the indoor women's title. Her best before that had been 59.4 secs. That was in April. Then she went right on, training harder than ever, taking more laboratory tests, and in July swam 58.1 in a meet in Chicago. She then went to Hawaii and won the 50 meter straight-away swim in the Keo Nakama meet; also swam 59.5 in the 100-yards and 1:06.4 in the 100-meters. She took wheat germ oil every day after her workouts!

In August, she entered the 100-meter swim in the AAU championships at Indianapolis and established a new record of 1:06., conquering both of the girls who had beaten her the year before at Portland! I met her as she climbed out of the pool, saying "Good old wheat germ oil! I don't get tired at the end of a race anymore."

She then came back to the laboratory in Urbana to see if her fitness tests had improved. Her all-out treadmill run at 7 mi./hr. had improved from 3:02 in March to 3:47; her Schneider Index improved from 17 to 19. In other ways she was about the same.

Willard Thompson won the high hurdles in 14.3 at the New Orleans invitation outdoor meet in January 1953, and won the 1953 Big Ten championship on May 30 in 14.5. In the NCAA meet at Lincoln, Neb., that year, he was third (about 14.5) to Davis of U.S.C. and McNulty of Illinois, with Davis 14.0.

The following winter he competed all through the indoor season with only fair results, but did 8.5 against Michigan, tying the meet record. In the spring season, he won the Big Ten Relay meet in 14.0, then in the next week or two he started hitting hurdles, fell a couple of times, and felt he was going stale.

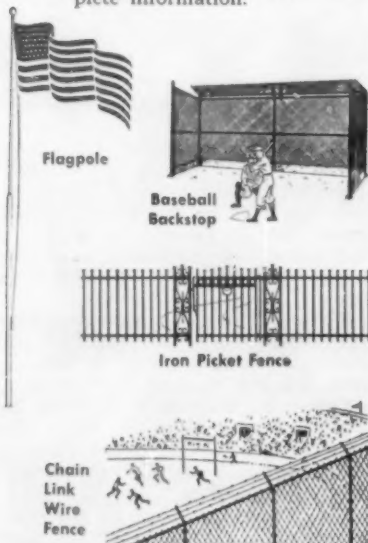
He came to see me about helping

(Continued on page 67)





For use in connection with athletic programs, Stewart offers many iron, wire and bronze products. For example: chain link wire and iron picket fence; baseball backstops; tennis court fence; stadium seat brackets; flagpoles; wire mesh partitions; window and skylight guards; settees; bronze plaques; iron railings, etc. Write for catalog containing complete information.



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## Organization of The Batting Order

By JERRY DAMREN

Baseball Coach, West Lebanon (N. H.) High School

**T**HE organization of the batting order is a matter that requires considerable thought and study. When haphazardly arranged, it will often bring up the wrong man at the wrong time—and cost you ball games. When soundly organized—in a fashion that fully exploits each boy's fortes—it can become a strong offensive weapon.

Several factors combine to make the job a difficult one. These include the shortness of the high school season, the limited number of available players, and the inexperience of the personnel.

Now let's break down the batting order into its individual components and see what are the ideal qualifications for each.

**NO. 1:** The leadoff batter's prime responsibility is getting on base as often as possible in any (legal) manner possible, without injuring himself. That qualifying phrase is added for the benefit of coaches who think nothing of instructing boys to get hit by a pitch. No coach should ever stoop to such tactics. No victory is worth the price of injury.

Your leadoff man should be a good hitter, a good bunter, and a good judge of balls and strikes. He should also be fast and a good baserunner. The smart No. 1 hitter seldom offers at the first pitch, particularly with nobody on base. He "works" the pitcher as much as possible, especially if he's having trouble with his control.

Physical size isn't of paramount importance in selecting a leadoff man. But the smaller the man, the more difficult he is to pitch to and the better his chances are for drawing the walk.

It isn't wise to use a heavy hitter in the No. 1 spot, as the percentage is against the preceding men getting on base very often once the game gets underway.

**NO. 2** isn't usually a "free swinger" (a fellow who takes a full cut at the ball all the time), but more of a

"punch" hitter (a fellow who's content to meet the ball where it's pitched).

One definite requisite of the No. 2 hitter is that he be a good bunter. He should also be taught how to hit to right behind the runner (hit-and-run play). He should be a fast man and a fairly good hitter. Speed is an asset in preventing double plays whenever the No. 1 man is successful in getting on.

**NO. 3** should be a real good hitter—probably the surest hitter on the team—and a good runner. In the event of a rally, his speed may prevent the double play and give the No. 4 batter a chance to hit.

**NO. 4** is usually the second best hitter on the team but with more power than the top hitter. He's the cleanup man—the one you depend on to drive in the most runs. He needn't be as fleet as the No. 3 man.

**NO. 5** may not hit as consistently as Nos. 3 or 4, but should be able to hit the long ball. In short, Nos. 3, 4, and 5 are the "meat" of your batting order.

**NO. 6** is actually a second leadoff hitter, and should be able to bunt well and possess a good eye for balls and strikes. If two candidates for the leadoff spot possess like qualifications, the best hitter of the two should be placed in the No. 6 position. The reason for this is that the No. 6 man generally comes up with more men on base than the No. 1 batter and can thus drive in more runs.

**NO. 7** very closely approximates the No. 2 hitter in qualifications; that is, he should be a good bunter, hit-and-run man, and a fairly good hitter. If two batters are generally equal in their abilities for either the Nos. 2 or 7 position, the faster of the two should be placed in the second spot and the slower in the seventh spot.

**NO. 8** is one of the weaker hitters. He may occasionally flash promise (Concluded on page 51)



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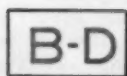
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# Dick Dailey, Schoolboy Wonder

(Continued from page 28)

should try to keep the far leg fairly straight. This will furnish more lift going up and less trouble hanging down, as the roll is executed.

The takeoff foot should be brought up under the body, preparatory to the secondary kick.

## THE ROLL

The jumper shouldn't let the far arm start across the bar and down too soon. He should reach up, but not across. (This is Dick's biggest fault at present.) The head should be kept up or at least level to prevent a dive that would cut off the top of the jump. As the roll begins, the boy should turn his head to look back at the takeoff.

The near elbow and arm should be brought up and back to bring the jumper face to face with the bar (done very well by Allard, Wiesner, Shelton). The secondary kick is a vigorous upward and backward extension of the near leg, kicking from the knee and at the same time rotating the hip. This can be practiced on the ground to get snap and layout.

The jumper should roll as he lands

to protect himself and follow through on his roll.

## MENTAL ATTITUDE

The jumper should assume that he has only one trial and that he must (will) make the height on his first try. As we say, "You really have to want it. Jump like you meant it."

## COACHING HINTS

Look for the boy who floats effortlessly over 5'.

1. Insist on a well-rounded workout. Short bursts of speed interspersed with "bounding" like a rabbit. Our nickname for Dick was "Bambi," due to his extreme youth and his graceful bounding gait. Spring and strength building calisthenics, i.e. Sargent jump, frog jumps, etc., should help.

2. Insist on quality of jumps; take pride in not missing or shying away. You learn little by knocking the bar down, or clearing a height with little effort. Dick misses very rarely. I think he is a good jumper because of his concentration.

To develop spring, explosiveness, and maximum use of arms and legs,

practice at heights that can be cleared with a good but not maximum effort. Take three or four tries using one step and jump, then two steps and jump, and then three steps and jump.

3. Some set schedule should be observed, adjusted to the individual so that most of his jumps are at challenging heights. When Dick was consistently clearing 5-10 or 11 with a best of 6¼, he observed this practice schedule: 2 jumps at 5-4, 3 at 5-6, 4 at 5-8, 4 at 5-9, and 2 at 5-10. If he made all the jumps at the loftier heights, he took one crack at 5-11 and so on.

4. "Bounce" a quarter mile.

Last spring, when Dick was consistent at 6-3 or 4 and just before he became consistent at 6-5, he was on the following schedule and rarely missed a jump: 4 at 5-8, 4 at 5-10, 4 at 6, and 4 at 6-2.

Toward the end of last spring, when he was consistent at 6-5 and had a best of 6-6 or 7, he jumped nothing less than 6' in practice, as follows: 4 at 6, 4 at 6-1, 4 at 6-2, 2 at 6-3, and 2 at 6-4.

The above schedule should be adjusted of course to the time of the season, meets, how the jumper feels, etc. However, he should try it every day. In the above schedule, Dick, the day before meets, usually jumped at the lower heights.

We've found it useful when nervousness and "rubber legs" set in, to take a quick bounding 50-75 yard run or maybe 8 to 10 push-ups.

and setting a new record of 6-3¾.

So well was Reavis progressing at this stage that Coach Hegarty was reluctant to make any changes in his style. He adhered to his plans of having Reavis do all of his practice jumping at 6' and over. The boy was not allowed to practice during the three days previous to a big meet.

As the season progressed, Phil did all of his practicing at 6-2 and over. He'd clear that height twice and then raise the bar to 6-4. Whenever he cleared 6-4, he'd try to repeat that height. Then the bar was raised to 6-5 and the process repeated. During his senior year, Phil cleared 6-6 at least six times in practice. On occasions he went over the bar at a measured 6-7.

The only significant change in Reavis' style was made by Coach Hegarty after the boy had won the National Interscholastics in New York. There he came under the eye of the great George Spitz, who expressed amazement at the terrific bounce the comparatively small youth possessed. He was emphatic in stating that Reavis had not yet reached his ceiling despite his lack of height. He suggested to Coach Hegarty that Reavis might go higher if he could introduce a more

forward roll which would lift his left shoulder and elbow away from the bar.

Though Hegarty had toyed with the possibility of having his jumper try the stomach roll, he had decided against it. He felt that Spitz' suggestion might be the answer to the problem of getting the boy's left side away from the bar. Invariably Reavis' misses were the result of striking the bar with his left shoulder or elbow.

The Somerville coach then began to work with his jumper to achieve a slight modification of his Western roll form that called for turning the left shoulder and lifting it away from the bar just as he gets above it. This leaves his chest closest to the crossbar and has him looking directly down on the bar at his maximum height.

Reavis, being a very agile youth with great reflexes, took to the new variation immediately. The result was even greater success.

In April of 1954, jumping off a concrete floor in the huge blimp

hangar at Weymouth, Mass., Reavis leaped to another all-time schoolboy record of 6-5½. On May 1 at the U. of Massachusetts Relays, Reavis cleared 6-4¾ and just after his graduation from high school in June, Reavis got up to 6-6¼ at the Caledonian Meet in Brookline.

Just how much higher he would have gone that day, no one will ever know because the standards in use in that meet could be raised no higher. Without exception, the coaches present insisted that he would have gone a couple inches higher, since he was showing the best form they had ever seen him use.

How right they were can be attested by the fact that as a freshman at Villanova, Reavis has already cleared heights of better than 6-8. The little Somerville "Space Man" thus continues to contradict the theory that only the physical giants are threats to the world's record in the high jump. Russia may yet run into Reavis—to its regret!

# Phil Reavis, Schoolboy Wonder

(Continued from page 26)





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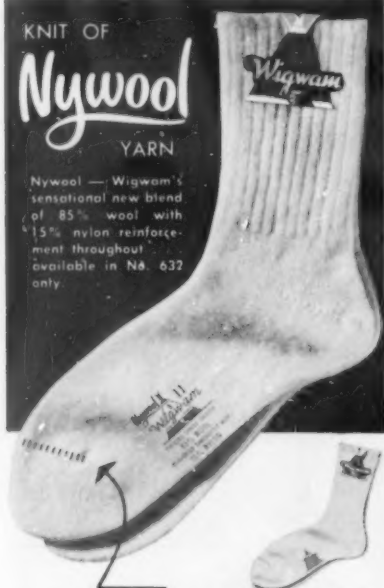
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## Scientific Catching

(Continued from page 11)

ful. Be sure to wear a heavy, dry sweatshirt and do your throwing at the end of the workout, so that you can go home and shower soon after completing your throwing.

Remember, if you haven't been getting too much exercise previously, take it easy. Don't try to get into shape in a week or a month. Allow yourself at least seven weeks of gradual work to prepare yourself for spring training.

### EQUIPMENT

The condition of the catcher's equipment is as important as the condition of the player himself. Poorly fitting equipment or carelessly maintained gear can cause injury and prevent the catcher from achieving maximum efficiency.

Let's start at the top with the mask. Proper fit is of vital importance. A mask that's too loose may obstruct your vision and generally annoy you to the extent where you may lose a ball and possibly the ball game. On the other hand, a mask that's too tight may subject you to headaches stemming from too much strap pressure on the temples.

The mask should be kept clean to avoid face infections. A catcher's face is always sweating and dirt from the mask can easily seep into the open pores. The catcher should clean the leather part with alcohol after every game.

A loose chest protector is also annoying and will sometimes prevent good throwing or perhaps cause injury. Every time the protector shifts, a portion of the body is exposed and thus left unprotected.

Shin guards that are too short expose the knee or instep to possible injury.

Until last year, toe injuries from foul balls were quite common. Ray Katt's entry into the big leagues was delayed by a broken toe suffered from a foul tip. One of the big sporting goods houses has manufactured a steel shoe specifically designed to eliminate this type of injury.

Now we come to the most important "tool of ignorance"—the mitt. Every good catcher possesses at least two mitts—one completely broken in for game use and another that's being broken in for emergency use and for such time as the game glove becomes too worn for further duty.

I know several catchers who re-

**O**NE of the smartest—and most traveled—young catchers in the minor leagues, Dickie Elkind has been picking 'em out of the dirt from Gastonia, N. C., to Modesto, Calif., since leaving City College in 1948. He caught batting practice for the Brooklyn Dodgers from 1943-47, and has been in two major league chains. This is the first of a series of articles covering every phase of the catching art, with every technique demonstrated by the author himself.

inforce the webbing with thin steel wire to prevent a ball from ripping through. Of course they cover the wire with tape so that the ball doesn't get cut or bruised.

A catcher or pitcher should never oil a glove. The oil has a tendency to "sweat" and its presence on a ball will cause it to sink or sail out of control.

An athletic supporter with a cup is an absolute must.

The wise catcher will always wear a sweatshirt, even in the hottest weather. Otherwise the uniform shirt will become heavy with perspiration and terribly uncomfortable. It's much easier to change sweatshirts than it is to change shirts. The sweatshirt also covers the arm up to the wrist and thus helps prevent sign stealing—as explained in the section on signs.

### GIVING SIGNALS

The prime concern in giving signals is to conceal them properly. This applies to both the hand and the arm. The smart catcher will keep his arm in the same position for every sign. A receiver who lifts or extends his forearm and elbow while signaling for a certain pitch might as well tell the batter what's coming, for a smart base coach will pick up this giveaway and relay it to the hitter.

That's one of the reasons every catcher should wear a sweatshirt. Where the arm is covered down to the wrist, an observant opponent will be unable to detect any telltale muscular action stemming from finger movements.

The usual way to flash the sign

# MEMO

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is by assuming a squat position with the feet fairly close together and parallel to each other. However, I deviate slightly in this respect. As additional protection against a sign-stealing first-base coach, I keep my right foot slightly ahead of the left. This helps shut off the coach's view of the signaling hand. You'd be astonished how much a smart coach can pick up from a careless catcher.

The knees are kept slightly apart, with the back straight, head up, and weight over the toes. The gloved hand rests over the left knee, concealing the sign from the third-base coach, while the right thigh is kept a little straighter than the left thigh as further protection for the sign.

The actual signal is given by the fingers, either in the center of the crotch or against the inside of the right thigh. The finger(s) should never be dropped below the crotch line, lest the sign be stolen from the rear.

The signals themselves can be quite simple—one finger, fast ball; two fingers, curve; three fingers, change-up; fist, pitchout. Watch out for the three-fingered signal. The normal way to flash this sign is with the three middle fingers. This usually produces tension between the fourth and the little fingers—which may result in a strained position of the forearm, thus tipping off the sign to an alert base coach.

The wise catcher, in giving a three-fingered signal, will use the last three digits for the purpose. This is a much easier and safer way of doing it.

A battery should always have one or two signal switches—a sign given off the mask, chest protector, or verbally—with which to cross up the opposition. This is particularly important with a man on second base. Such runners are in ideal position to see the regular signs and relay them to the hitter.

When making the switch, be sure you're not crossed up by the pitcher. Have him make some sort of acknowledgment. Also make sure your infielders know these switches.

While there are any number of sign systems available, the catcher may sometimes be called upon to improvise his own. For example, in 1952 at Asheville, we had an extremely astigmatic pitcher who couldn't see my hand. I therefore gave the signs with my head.

If I looked down the third-base line, it was a fast ball; the first-base line was a curve ball; straight ahead was a change-up; and if I looked down and adjusted the mask with my gloved hand, it was a pitchout. All this while I was giving the regular finger signs as a decoy.

I don't think anybody ever picked up those signs. It serves as an example of what any catcher with a little imagination can do.

#### BASIC STANCE

After giving the sign, the catcher should rise to his regular semi-crouch position—getting as close to the batter as possible. The principal concern is to be well-balanced on the front part of your feet. The receiver should never catch on his heels, as this makes correct shifting almost impossible.

I won't suggest that a catcher keep his feet a certain distance apart. It all depends upon the player's size. A 6-4 catcher would probably be very uncomfortable if he assumed the same stance as a 5-8 receiver. The athlete should just make sure his balance is good and keep the right foot a little in back of the left to facilitate his throw.

As far as the target hands go, this is a matter of style—like putting in golf. Most catchers like to keep the bare hand at the side of the glove with the fingers semi-clenched. I don't like this conventional method. A shot on the knuckles can cause injury.

A former manager of mine in the Pittsburgh chain, Mickey O'Neill, caught for 25 years without splitting or fracturing a finger, by keeping his bare hand open and facing the pitcher—like a boxing trainer when "catching" a fighter's warm-up jabs in his palms.

Mickey said that he had received some bruises on the palm and heel of his throwing hand, but nothing serious enough to necessitate removal from a game. That's quite a record, and a catcher could do a lot worse than copy this highly unorthodox style.

#### CATCHING THE BALL

High pitches should be caught with a minimum of body raising. The reason? If an ump's view is obstructed by your head and body, he'll invariably call the pitch a ball—with perhaps a warning for you to stay down.

A pitch below the waist should be caught with the fingertips facing down. Conversely, a ball above the waist should be caught with the tips up.

An experienced catcher, however, can "cheat" on low border-line pitches by catching the ball with the tips up but in the heel of the glove, thus giving the illusion that the ball is higher than it actually is. You can "steal" many a strike this way.

Don't pull a pitch from the ball



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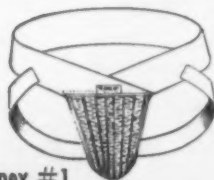
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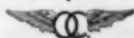


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area into the strike zone. This is strictly "bush" and you'll never fool an umpire.

As far as inside and outside balls are concerned, the solution is basic. Catch every ball possible in the middle of the body by shifting the feet accordingly—stepping with the right foot on outside pitches and the left foot on inside pitches (right-hand batter).

Backhanding a ball to your right or reaching for a ball to your left is dangerous. To get into the habit of catching the ball in the middle of the body, practice it at all times—when playing catch or warming up a pitcher—so that it becomes as automatic as putting on your mask.

Pitches in the dirt should be blocked by the body (usually the protector) whenever they skip over or under your mitt. Except when a man is stealing. The ball should then be handled in infielder fashion. Try to pick it up cleanly and throw. I've never seen a catcher throw a man out while he was on one or both knees.

### CATCHING FOULS

The most important thing to remember about foul flies is that they always (under normal conditions) drift back toward the infield. The higher they are, the more they'll drift. After a catcher has had a few drop in back of him while facing the backstop, he usually gets the idea.

I always try to play the ball 6 to 10 feet in back of the point where I figure it to land after reaching its zenith. If the ball is very high, don't glue your eyes on it after you've approximately determined its landing point. Otherwise you'll get dizzy.

Before the game (or before every inning), it's always a good idea to check both the strength and direction of the wind, either by glancing at a nearby flag or by tossing loose blades of grass into the air.

It's generally agreed that a catcher should hold on to his mask until the direction of the foul is discerned, and then flip it away. However, I always grab the chin rest and flip it back hard over my head, letting the mask fall where it may. I have never stepped on my mask or seen anybody else do so.

But, since Hank Gowdy lost the 1924 World Series by doing so, maybe it's not a bad idea to grab the mask and look before flipping it away.

Though many big league catchers can tell just by the sound whether they have any chance to reach a foul pop, school catchers shouldn't be encouraged to guess. They should take a look whenever in doubt.



Another important point is to always try to position yourself with your back to the infield. A ball drifting toward you is a lot easier to catch than one curving away. That's why the first or third baseman should handle any pop-up he can catch that isn't an easy play for the catcher.

It shouldn't be necessary to add that with men on base, the catcher should wheel toward the infield immediately after catching a foul fly. Many inexperienced kids are careless about this and as a result have had smart runners advance a base after the catch. The catcher should never throw the ball unless necessary. He should "run" the ball back toward the infield.

**Next month:** The author will cover the science of throwing, taking throws, fielding bunts, backing up bases, handling the pitcher, and strategy.

## Pitching Pointers

(Continued from page 22)

third base occupied—back up home. On a deep fly ball, the throw should never be made home and you should cover accordingly.

8. In other words, there are innumerable situations in which you'll have to back up the play. If you find yourself standing on the mound, *you are wrong*. Go somewhere.

9. With first base occupied and a bunt in order, throw the ball high and inside to a right-handed hitter or high and outside to a left-handed hitter, and break toward the hitter the *moment* the ball is thrown. Don't wait until the batter bunts the ball. That's too late.

10. With first and second occupied and a bunt in order, break toward the third base side of the diamond. Let the third baseman know if you can handle the bunt so that he can retreat and cover third. Field all bunts except the one that's pushed hard down the third-base line.

11. With men on base, make this your rule: Never will I throw a slow-hit ball to any base but first.

12. If a ball is hit to you and a runner is caught halfway, run directly toward him and turn him toward the nearer base.

13. With two men out, be careful of "slow stuff," as the runner might be stealing on any pitch.

14. Pitching is 90% perspiration and 10% inspiration.

15. Remember that the pitcher who stays ahead of the batters is a winning one.

16. On the day before you pitch, warm up lightly, do enough running to loosen up, then get plenty of rest.

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writes **Raymond Traynor**,  
Burbank High School Rifle Coach



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# COACHES' CORNER



Please send all contributions to this column to Scholastic Coach, Coaches' Corner Dept., 33 West 42 St., New York 36, N. Y.

**W**HEN John Yonakor was playing end for the Cleveland Browns some years ago, he was having a tough time containing Frankie Albert of the 49ers. When Yonakor crashed, Frankie went around him. And when Yonakor held back, Frankie passed over him.

Coach Paul Brown finally yanked him. "Look, John," he said, "I'm paying you \$8,000 just to stop that man. Do something about it."

John went back in, but Albert continued to bewitch, bother, and bewilder him. So Brown yanked Yonakor again. He met the big ex-Notre Dame star at the sideline and said, "John, I told you I'm paying you..."

"Look, Paul," Yonakor interrupted. "I just found out that they're paying Albert \$15,000 a year to run around me!"

**Sonny Hertsberg**, Knick scout, and Red Auerbach, Celtic coach, were discussing pivot men. "The best 6-3 pivot I ever saw was Tom Feerick," declared Sonny.

"I'll name a better one," replied Red. "Frank Ramsey. When Frank misses the shot, he'll follow up and get the ball back."

"Very nice," said Sonny. "But Feerick didn't have to get the ball back. He never missed!"

**George Dempsey**, of the Philadelphia Warriors, was a divinity student at Kings College. Upon reporting to the Warriors, he told his teammates that "The good Lord has sent me to help this team and make sure nobody breaks any training rules."

The fellows looked at him in astonishment. Then Danny Finn snapped, "The hell he did! You came here because you got a letter from Gottlieb! (Philly owner, Eddie Gottlieb.)"

The dedication of track men to their events cannot be surpassed. For example, when Marty Engel, Uncle Sam's 35-pound weight record holder

now in the Army, showed up at NYU for a workout during the Xmas holidays, he told Coach Emil Von Elling to "Please let me know when it's 11 o'clock."

"What are you going to do then?" asked the curious coach. "Take a nap?"

"No," replied Marty, "I'm getting married at 1."

**Notre Dame** was playing SMU down in Dallas, Tex., and a priest up on the 50-yard line kept cheering like crazy—for SMU! Jack Lavelle, the fabulous football scout and story teller, couldn't contain himself. He tapped the priest on the shoulder.

"Father," he said, "as a Roman Catholic priest, how can you keep cheering for a Presbyterian school against Notre Dame?"

The priest looked at him scornfully. "Once a Texan always a Texan!" he replied.

**After the Seton Hall-Villanova** game, somebody asked Honey Russell, Hall coach, whether Villanova's Bob Schafer still shoots from mid-court. "Mid-court?" snapped Honey. "We were playing in Philadelphia and he was shooting from Pittsburgh!"

## COACHING SCHOOL INFORMATION

ARE you running a coaching school this summer? Know of any being held in or around your area? *Scholastic Coach* is compiling its annual Coaching School Directory (to be published in April and May) and would appreciate information about all such schools. Drop us a card and we'll send you (or the school's director) a form for listing all the pertinent details. This will enable us to give the school a free listing. Address your card to Scholastic Coach, Coaching School Directory, 33 W. 42 St., New York 36, N. Y.

**On the subject of golf**, there's the true one about Billy Joe Patton, the spectacular North Carolina amateur. Billy's a nice, easy-going fellow who's always grinning and chatting pleasantly with the gallery. Very little gets under his skin. He calls the rough "Billy Joe country."

At Baltusrol, he found himself playing an exceedingly tough lie in the rough. As he was lining up the shot, he noticed the marshals struggling to keep the crowd back.

Billy Joe grinned. "Look, fellows," he said. "Go easy on those people. They have just as much right to be in the rough as I have."

**The job seeker** button-holed a coach who had just been signed to a three-year contract. Though desperate for a job, he could still kid. "How about a job as stadium janitor?" he asked the new coach.

"Hell, no," replied the mastermind. "I'm saving that job for myself when my contract runs out!"

**Some of professional boxing's** dirty linen was dragged out into the air last month, and the air hasn't been the same since. The occasion was an investigation of the two large managers' guilds in the New York area, and some of the questions and answers set new international records for illiteracy.

At one point, one of the local guild leaders claimed that when he was a member of the other monopolistic outfit, he could get his fighter numerous matches.

"And what happened when you quit to join the other organization?" he was asked.

"Well," he said, "we don't get so many numerous fights no more."

**A few hours before** the state championship playoff, the coach of the underdog team was entertaining a friend in his hotel suite, when a low supplicating voice was heard in the next room.

"What's that?" asked the visitor. "That's my wife praying for me to win."

"Well, aren't you going to pray, too?"

The coach shook his head. "My wife is more devout than I am," he explained. "If He won't do it for her, He certainly won't do it for me."

**A short time after slapping** a technical foul on Bob Cousy, Referee Sid Borgia went looking for the great Celtic ace. "Bob," he said, "would you mind autographing a program for my neighbor's kid?"

Cousy sighed. "So you want my autograph, eh? Only a few minutes ago, it cost me 25 bucks just to talk to you!"

**Placideo Gomez**, Brooklyn College (N.Y.) basketball coach, declares himself in favor of a 24-second limit on possession in college basketball. "It

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certainly won't hurt us at Brooklyn College," he avers. "We can't even hold the ball for 10 seconds now!"

George L. Henderson, hoop coach at Toluca (Ill.) H.S., wants to know if any high school team can match the short-term scoring record his team compiled last season. Over its first 2 games, the team averaged 111 points a game; over the first 3 games, 102 points; over the first 4 games, 95 points; and over the first 5, 93 points. That's pourin' 'em in, all right. And what makes the feat even more noteworthy is that the tallest boy on the varsity stood just 5-10½.

Commissioner L. V. Phillips of the Indiana H.S.A.A. proudly informs us that the state high school attendance record for a regularly scheduled game fell with a thud on December 15 when 11,255 customers paid their way into the Butler Fieldhouse to see Technical H.S. match hooks and dribbles with its local rival, Crispus Attucks.

A former coach, now vice principal at Fresno (Calif.) H. S., John Solo decided to take in the game between Edison of Fresno and East Bakersfield, at Bakersfield. He bummed a ride with one of the game officials. Upon his arrival at the gym, sans ticket, he was stopped by the gate man. "Where's your ticket?" he was asked.

"Oh, I'm with Fresno official," he retorted. "Had to drive him down. He doesn't see very well, you know." (Relayed by Edison coach, Elam R. Hill.)

Ever since his two superb basketball articles appeared in *Scholastic Coach* (October-November), Bobby Sand has been deluged with fan mail congratulating him on his pieces and asking for more. His favorite letter was sent by T. A. Tudury, Jr., coach at Hickory (Miss.) H. S., who wrote. "I must say I agree with the principles in your article on give-and-go basketball. I employed your offense at Hickory and we won six straight games with it! I'm coach of the GIRLS basketball team."

Mercer Beasley, the veteran tennis coach, has drawn up a will specifying that his ashes be strewn on the stadium courts at Forest Hills. "What I like to think," Beasley says, "is that some player, getting ready to serve, will look down at the grass and say to himself, 'Old Beas sure makes a nice court!'"

The heartbroken husband, his wife gone to Reno, was being consoled by a buddy. "It could be worse. Think of Joe DiMaggio. He was divorced by Marilyn Monroe."

"He was?"

"Sure. She said he was too cool and reserved."

"DiMaggio was cool and reserved with Marilyn Monroe? Boy, with control like that he should have been a pitcher!"

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## Organization of The Batting Order

(Continued from page 38)

as a hitter, but is generally inconsistent.

**NO. 9** is generally the weakest hitter on the team.

In organized baseball, the pitcher and catcher are usually slotted into the last two positions in the batting order. Since this article is written primarily for the high school coach, it might be well to investigate this a little further.

There are two factors to consider here. First, in organized ball the catcher and pitcher usually are the poorest hitters on the team and thus naturally belong in the Nos. 8 and 9 spots.

Second, you must remember that organized leagues play nearly every day and the same battery men aren't always in the lineup. If different catchers and pitchers were slotted in different spots in the batting order every day, it would tend to disrupt the general offensive pattern of the team.

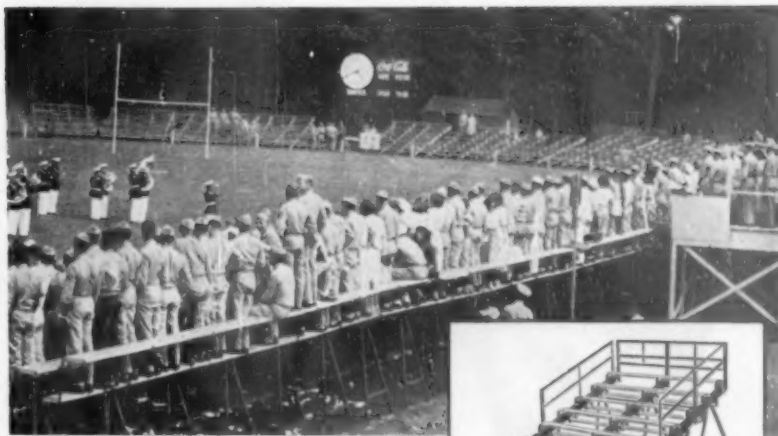
Naturally, there are exceptions to the rule. Hard-hitting catchers like Berra and Campanella play practically every day and are batted fourth or fifth to exploit their hitting. And last year Manager Bucky Harris of the Senators had pitcher Mickey McDermott batting seventh or eighth. Since McDermott is a fine hitter, it would have been foolish to bat him last. However, these are exceptions to the rule.

### CHARGING THE BATTERY

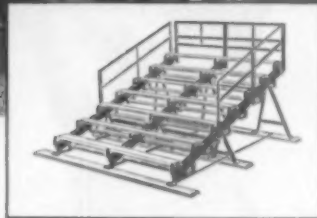
In high school ball, teams play abbreviated schedules and are only in action two or three times a week. For this reason, it's neither imperative nor wise to automatically relegate your battery men to the last two positions in the batting order.

On the contrary, the average high school pitcher and catcher are frequently the best all-round players on the team, and the coach should slot them where they best qualify and will most benefit the team's offense.

In the foregoing, the batting order has been analyzed position by position, along with the general requirements of each hitter. It's understood, of course, that the average high school coach is seldom blessed with the material to fill each slot so ideally. However, the pattern given may serve well as a guide.



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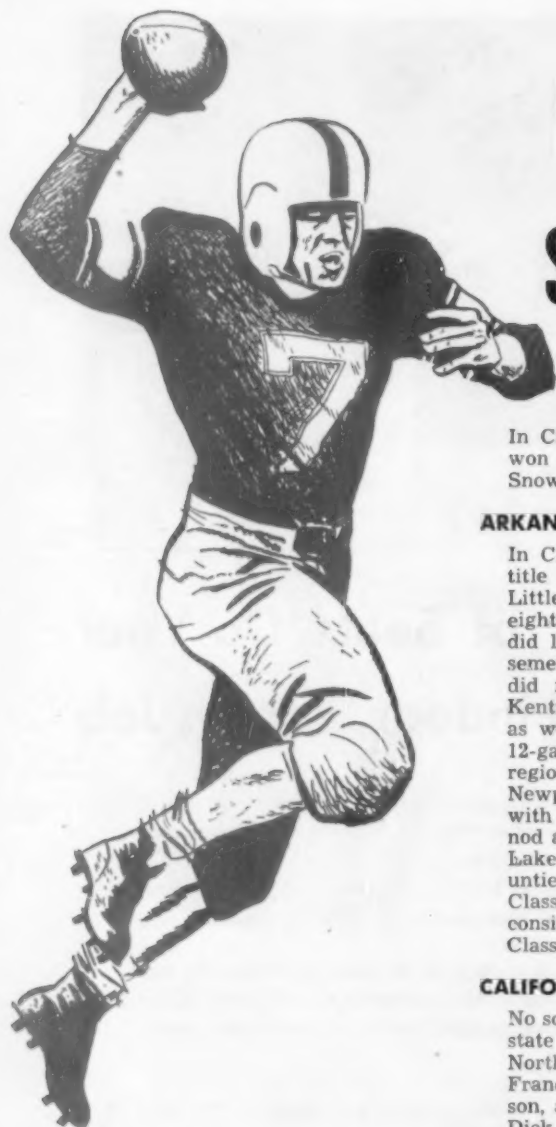
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# State High School Football

In Class B, regional crowns were won by Superior, Buckeye, and Snowflake.

## ARKANSAS

In Class AAA, it was a clear-cut title for Coach Wilson Matthews' Little Rock team, the seventh in his eight years of coaching. The Tigers did lose to Texarkana, Tex., Bessemer, Ala., and Istrouma, La., but did manage to polish off strong Kentucky and Tennessee opponents as well as six Arkansas foes in a 12-game schedule. In Class AA, the regional champs were VanBuren, Newport, Russellville and Camden with Camden generally getting the nod as the strongest. DeQueen and Lake Village, both unbeaten and untied, had outstanding marks in Class A, while Dierks (11-0) got considerable recognition as the best Class B eleven.

## CALIFORNIA

No school dominated its part of the state the way Vallejo did in the North Coast area (environs of San Francisco). Coached by Bob Patterson, and triggered by the fabulous Dick Bass, the Apaches never scored less than six touchdowns per game and went as high as 87 points in one game. Bass himself averaged 14.8 yards per try and three touchdowns per game. In the area were seven other unbeaten and untied teams, but they gained scant recognition with Vallejo around. They were: Eureka, El Dorado, Serra of San Mateo, Yreka, Oroville, Pittsburg, and Rio Vista. Oroville now owns a 19 game win streak. In mid-state, Bakersfield climbed to the heights to win the San Joaquin large schools crown in a 20-6 playoff against Fresno. Selma, Kingsburg and North Bakersfield won the smaller school crowns. Honors in the CIF Central Section went to Centennial, a new school in Compton, which defeated Glendale Hoover, 12-6, scoring on a pass after the final gun had sounded. It was a noteworthy triumph since the section is comprised of 10 leagues of the largest schools in the Los Angeles area (city schools excluded), and 16 tough squads qualified for the four-round

eliminations. Smaller schools in the southern are divided into two geographical groups and the titles were won by Chula Vista and Hawthorne. Manual Arts had a strong eleven which won the Los Angeles championship from Los Angeles H.S., 21-0.

## COLORADO

Longmont retained the state Class AA title in the Northern Colorado League for the fifth straight year by trouncing Grand Junction, 40-7, in the finals. Longmont will have four all-conference selections returning for another season in 1955 and should be tough again. Two teams which have never gained a title, Durango and Lamar, fought for the Class A crown and the result was a 7-7 tie. Louisville turned back Meeker, 26-13, in the Class B final, marking the third straight year Meeker was runner-up.

## CONNECTICUT

Notre Dame (New Haven) and Danbury had unbeaten and untied records among the state's larger schools, while Naugatuck sustained one tie. Notre Dame was considered best since it outscored its opponents, 332-12, but Danbury's defensive platoon allowed only 27 points. Lewis of Southington, a perennially rugged Class B eleven, also was unbeaten and had a high scoring crew which rolled up 329 points in eight games and placed three big boys on the first team all-state. Joe Fontana coached Lewis; John Janenda, Notre Dame; and Ray Legenza, Naugatuck.

## DELAWARE

The mythical title was shared by Salesianum of Wilmington and William Penn of New Castle, each with a 9-1 record. Seaford proved to be the outstanding downstate eleven.

## DISTRICT OF COLUMBIA

St. John's captured the city Catholic title for the fifth straight year and instead of playing the public league victors for the championship of the district, they took on an all-star team from the entire public league, losing 12-7. St. John's later

## ALABAMA

Snitz Snider's Bessemer eleven captured its third unofficial state title in the past four years, beating all comers from Alabama as well as Little Rock, Arkansas champs, 20-7. Athens and Etowah pressed the champs, each having one tie. Other splendid records were turned in by Sylacauga, Elba, Washington County (Chatom), and Stevenson, all in smaller enrollment classes.

## ARIZONA

Arizona tried a new plan, with six leagues based on enrollments. Of the top 10 schools (Class AA), Phoenix Union, coached by Sam Winningham, grabbed the crown with a 7-0 record, and had only an out-of-state tie with Redlands, Calif., to mar its escutcheon. Class A was divided into North and South sections (10 schools in each) and the respective crowns were annexed by Tempe and Bisbee. Max Spilsbury coached Bisbee while John Zucco led Tempe.



# Champions, 1954

dropped a post-season game to Miami, Fla.

## FLORIDA

Though suffering two losses to out-of-state foes, Miami Senior was voted No. 1 in the state for the third time in five years. Miami defeated its closest rival, Miami Edison, 6-0, to clinch first place. Edison was champion of the tough Big Ten Conference, while much smaller Auburndale chalked up a splendid undefeated record to win the Ridge Conference crown.

## GEORGIA

Roosville, a school from the Tennessee border, won its first state Class AA championship by virtue of a sound 38-0 thrashing of Savannah. Jesup, with a huge line, stormed by Rockmart to capture Class A honors, while Model of Shannon (13-0 over Claxton) and Hawkinsville (20-6 over Buford) were winners in Classes B and C, respectively. Both smaller class champions were repeaters.

## HAWAII

Punahou's powerhouse repeated as champions of the rugged Honolulu Interscholastic League, but sustained a stunning reversal on Thanksgiving Day when runner-up Iolani pushed the Puns all over the field to win, 26-7, in the feature game of the annual post-season doubleheader. A crowd of 24,500 watched the 1954 proceedings.

## IDAHO

Coach "Gabby" Williams turned out a powerhouse at Lewiston in Northern Idaho, that was considered by some as one of the greatest in state history. They won the Inland Empire League title and defeated Boise of the Big Six loop, 66-13, en route to an undefeated campaign. Nampa was champion in the Big Six, defeating Caldwell, 7-6. Nampa had only a tie with Montana champion, Great Falls, to blot the record. In the Cross-State League, a new group of 10 schools formed by the merger of two old loops, Malad and Buhl shared the crown with 7-1 records. Rigby, North Fremont of Ashton, Declo,

and Shoshone were smaller schools which compiled enviable records and conference championships, but did not rate with the larger elevens.

## ILLINOIS

Only East St. Louis of the state's larger schools came through unscathed. Wheaton, Abingdon and Macomb, slightly smaller, were unbeaten and untied, as were "little fellows" Chenoa, Eastern of Charleston, Roxana, Arcola, East Dubuque, Glenbrook, Chillicothe, and Immaculate Conception of Elmhurst. Fenger of the Chicago Public League had one tie to mar its record and went on to defeat famed Mt. Carmel for the city championship, the first time since 1949 that the Catholic League relinquished its hold on the crown. Schools winning conference titles among the larger enrollment classes were: (New Trier Suburban), Hinsdale (West Suburban), East Aurora (Big Eight), Sterling (North Central), Moline (Northwest), Thornton (South Suburban), Peoria Central (Big Twelve), and Centralia (South Seven).

## INDIANA

Whiting upset the pollsters in the Northern Indiana championship game with South Bend Riley. Previously ranked fifth in the state, the proteges of Ray Galivan thumped the Eastern Division champs, 12-6, and with their victory gained first place in the unofficial poll, jumping ahead of New Albany, Muncie Central and East Chicago Roosevelt. Actually, Whiting tied for the Western Division title with Roosevelt and Gary Emerson, but won a coin flip for the right to play Riley for the crown. For years the Northern Conference has dominated Indiana football and it's a rare year when a school from another section of the state can win the title. The loop embraces 23 large schools from Fort Wayne in the east to East Chicago and has been a great breeding ground for future Big Ten stars. New Albany, Terre Haute Garfield, Rensselaer, Beech Grove, Danville, and Auburn finished their campaigns undefeated and untied.



## IOWA

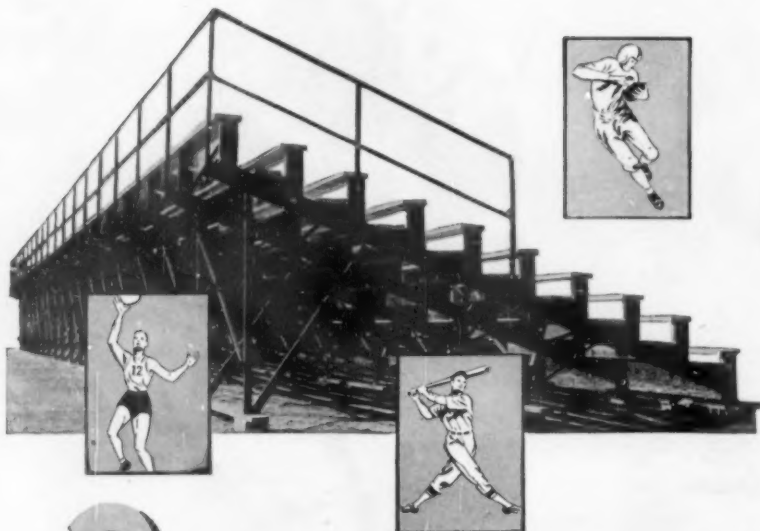
Two state newspapers conducting polls agreed that Roosevelt of Des Moines was the state's best in 1954. The charges of Archie Johnson, in his 13th year at the helm, won all eight of their games in impressive fashion. Davenport, loser to only Iowa City, finished second in both polls but was hopelessly outclassed. East Sioux City, Carroll (a smaller enrollment school), St. Ambrose of Davenport and West Waterloo were other highly rated teams. Among the small schools, Manson had greatest support.

## KANSAS

Both Lawrence and Pittsburg had good claims on the state title and the two polling services managed to split it up. Lawrence, once-tied, played in a stronger league, but Pittsburg won all its nine games. Jim Woolard coached Lawrence, while Martin Rhode tutored Pittsburg. Other leading conference champs included Wichita West, McPherson, Hays, Caldwell, Moundridge, Marion, Fredonia, Concordia, Hoisington, Plainville, Colby, Leon, Winchester, Arma, and Maur Hill of Atchison.

## KENTUCKY

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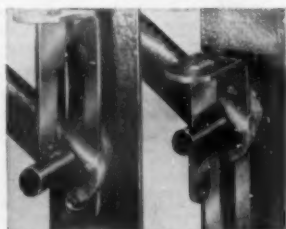
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ly without defeat or tie. However, its schedule failed to provide it with enough points to gain top-ranking, and coach Ed Rutledge's Sailors were ranked only 11th in the state. Male High of Louisville, coached by Charley Kuhn, edged out Owensboro and Mayfield for top honors. Only loss sustained by Male was to strong Purcell of Cincinnati, Ohio, by a 53-7 count.

### LOUISIANA

Ferriday, coached by Charlie "Red" Robertson, made big news when it captured the state Class A championship with a 14-0 win over Gonzales. The team had been Class B champ in 1953 and it marked the first time in history a school had won titles in two classes in as many years. While not in Louisiana's largest grouping, Ferriday was rated strong enough to give many of the state's Triple-A teams a good battle. Donaldsonville succeeded Ferriday in Class B by defeating Delhi, 19-14. Minden downed Behrman, 14-0, for the Class AA crown, while Lake Charles earned the rating of No. 1 in all the state with its AAA championship win over Baton Rouge, 35-12. Jimmy Austin coached the offense-minded winners.

### MAINE

Thornton Academy of Saco was large school champion, running off 10 straight victories. Coach Tommy Eck's champs ran up 299 points to 39 for the opposition, and seven squadmen were listed on the first three all-state teams—only two of them seniors. Other large schools with fine records included Lewiston, South Portland, and Bangor. Gardiner was champion of the middle enrollment group, while Berwick Academy copped small school honors on a statewide basis.

### MARYLAND

Irv Biasi's strong Patterson Park team won the championship of the Scholastic League embracing 14 large public, parochial and preparatory schools in the metropolitan area. Patterson won seven games and lost none in loop competition. In the suburban Washington area, Montgomery-Blair of Silver Spring (coached by Conrad Brown) went undefeated in eight games.

### MASSACHUSETTS

Lowell and Brookline won smashing victories over traditional foes on the final day of the season to share the Eastern Mass. Class A crown. Lowell, coached by Ray Riddick, downed Lawrence, 19-7, while Harry Downes' Brookline club, long a power in Class B, romped over Newton, 39-7. Both champs had unblemished records. Malden Catholic won the Class B crown, though Gardner also went undefeated. Woburn in Class C and

Ipswich in Class D were the other title-winners. In Class C, Stoughton and Wareham were undefeated, untied, but failed to pile up enough points to share the crown. In Western Mass., Springfield Tech barely edged Chicopee for top honors. Chicopee defeated Tech, 21-20, but lost one and tied one during the rest of the season.

#### MICHIGAN

An unmarred record plus a high calibre of opposition gained almost universal recognition for Grosse Pointe as Class A champion. Dearborn also got by eight games unmarred, while Ann Arbor and Battle Creek Central, playing in perhaps a slightly tougher league, tied each other and thereby lost their chances at the title. U. of Detroit High also had a tie on its record but was city champion by virtue of a 23-20 win over Redford St. Mary's in the Public-Parochial playoff. Iron River, Three Rivers, Detroit St. Anthony, Center Line, Alpena Central Catholic, Mount Morris, and Lansing Everett were unbeaten and untied in Class B, while no less than 13 Class C elevens had perfect marks. Jackson St. Mary was awarded the state title by one Detroit newspaper. The feat that probably cinched the Class A title for Grosse Pointe was performed against tough Port Huron, when the Pointers scored on the first play from scrimmage, had 28 points by the first quarter, and ended with 56.

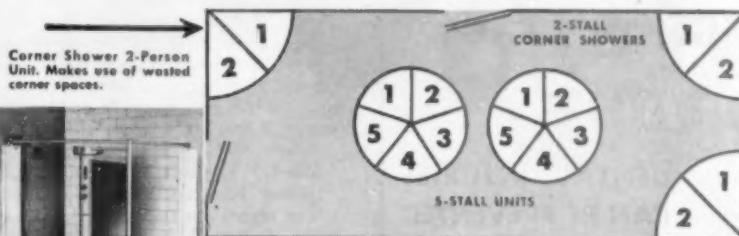
#### MINNESOTA

International Falls, coached by Frank Larson and featuring Bronko Nagurski Jr., was awarded the mythical state crown. Minneapolis Washburn finished second at the close of the regular season, but a stunning defeat by St. Paul Central (ranked sixth at the time) reversed the figures. Hopkins, Bemidji, and Morgan Park of Duluth were large schools which wound up perfect seasons. Nashwauk, Montgomery, Spring Valley, Adams, and Cokato were smaller fellows who went all the way and gained considerable recognition. Rochester and Red Wing tied for the Big Nine crown in the state's biggest conference.

#### MISSISSIPPI

Every few years, Doss Fulton comes up with a real old-fashioned powerhouse at Jackson Central and 1954 was one of those years. Jackson copped Northern honors in the Big Eight Conference, then whipped Hattiesburg's Southern Division titlists, 27-0, in the playoff. The conference is comprised of the 18 largest schools in the state. Among the smaller leagues, Winona, champion of the Delta Valley, Forest Hill of the Little Dixie, and Philadelphia of the Choctaw were champions who compiled fine records.

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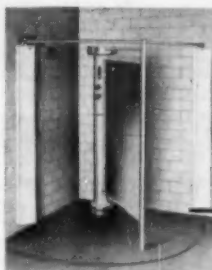
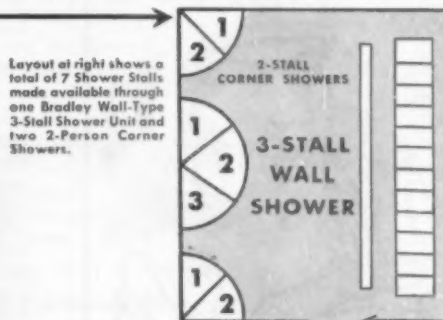


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### MISSOURI

Webster Groves, suburban St. Louis champions, received an almost unanimous accolade from the state's sportswriters for the championship. It was the first year a poll had been used to award the title. The Statesmen rolled to nine straight victories, placed three of their four backs on the all-district teams (plus two linemen), and generally dominated the Eastern half of the state. Coach Ray Moss was blessed with 24 seniors and a complete veteran line-up. Kirksville, a repeat champ in the North Central Conference, was second in the eyes of the writers, followed by Sikeston, Rolla, Beaumont (the St. Louis city champ), Little Gower, Rockhurst of Kansas City, Neosho, DeSoto, and Lexington.

### MONTANA

To determine the Class AA champion, the six largest schools in the state play a round-robin schedule, then the first two finishers play each other for the title. This often leads to playoffs of ties, etc. In 1954 the oddity was that Great Falls had to defeat Flathead County of Kalispell on successive week-ends. Coached by Bill Swarthout, the Bisons first won a 12-6 victory for first place in the standings, then a 14-7 game for the state crown. Glendive defeated Butte Central Catholic for the Class A diadem in the East-West playoff. Regional champions are determined in Class B. They were: Wolf Point (East), Billings Central Catholic (South), Dillons (Southwest), Polson (Northwest), and Great Falls Central and Shelby which shared the Northern crown.

### NEBRASKA

Lincoln Central was acclaimed Class A champion on the basis of nine straight wins. Coached by Bill Pfeiff it never scored less than 26 points, averaged 43 points per game, and was never pressed. Creighton Prep of Omaha, ranked second, was also unbeaten but failed to display the margin of superiority over opponents that Lincoln did. Six smaller schools ended with perfect marks—Callaway, Falls City, Guide Rock, Omaha Holy Name, Ponca, and Tekamah. Of these, Holy Name (Class B) was named to a state title. Geneva, beaten once by a Class B eleven, was awarded the Class C crown.

### NEVADA

Las Vegas went looking for trouble last season, but supplied more than it received. A 34-14 win over Reno assured it of the state Class AAA title, but wins over Compton, Blythe, Pasadena, Muir Tech, and Van Nuys, all California schools, and Phoenix (Ariz.) Tech gave Coach Angelo Collis' squad a tremendous season. The team dropped

three games (San Diego and Anaheim, Calif., and Carbon, Utah) on a schedule that took them into four states. All losses were close. Elko and Ely tied, 14-all, for the Class AA title, while Yerington was the Class A winner.

### NEW HAMPSHIRE

Nashua, for the third year in a row, was Class A champ. Stevens of Claremont was Class B champ, and undefeated Hampton won in Class C. Coaches of the champs were: Buzz Harvey (Nashua), C. P. Parker (Stevens), and John Peterson (Hampton).

### NEW JERSEY

Clary Anderson's Montclair eleven won nine straight games for the sixth time in nine years and piled up the highest point total in the state's Collision Rating System. Memorial of West New York, under Joe Coviello, also went unbeaten but could not get enough "rating points" out of the opposition it defeated to equal the Mounties. The same was the case for a fine Paterson Eastside eleven. Phillipsburg, in West Jersey, was unbeaten and untied until its final game with Easton, Pa., which it dropped by a heart-breaking 7-6 margin. The smaller schools had only Millville, Hasbrouck Heights and Swedesboro with unbeaten and untied marks, though Freehold, Frenchtown, Franklin, and Red Bank Catholic sustained only ties. Teams which were awarded sectional championship were: Group IV—Montclair, West New York, Paterson Eastside, Asbury Park, Thomas Jefferson of Elizabeth, and Camden. Group III—Tenaflly, Linden, Summit, Somerville and Merchantville. Group II—Lyndhurst, Dover, Highland Park, Freehold, and Millville. Group I—Pompton Lakes, Hasbrouck Heights, Hackensack, Swedesboro, Florence and Frenchtown. Catholic A—St. Michael's of Union City and Trenton Catholic. Catholic B—St. Mary's of Rutherford and Red Bank Catholic.

### NEW MEXICO

Highland of Albuquerque, a comparatively new school, won the AA title by soundly defeating Artesia, 20-0, in the elimination finals. Gadsden of Anthony, featuring a great back in Sal Gonzales, won the Class A crown, 38-13, from St. Michael's of Santa Fe. Other final results were: Cathedral of Gallup 13, Fort Sumner 7 (Class B), and Tularosa defeating Kirtland Central in Class C.

### NEW YORK

The Westchester County crown was shared by Mamaroneck and New Rochelle, while Mepham of Bellmore, coached by Nick Sabetto, annexed the Triple A semi-official Long Island title. Continuing down-



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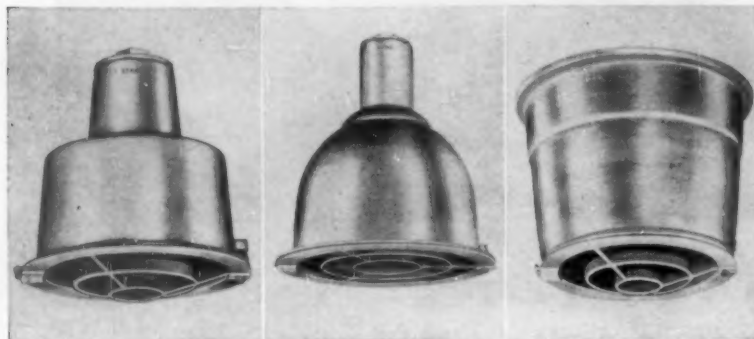


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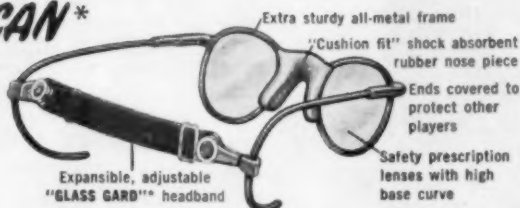
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state, New York City had two unbeaten elevens, Stuyvesant and Brooklyn Tech, with no official champion. The newly formed Catholic League was won by Iona Prep of New Rochelle. Fordham Prep won eight straight, but was not in the league. Traveling up the Hudson River Valley, strong teams were found at Kingston (DUSO League champ) and Highland, undefeated in its area. In the Capital District, Mont Pleasant and Nott Terrace, both of Schenectady, and Vincentian Academy of Albany had splendid teams. In Central New York, Vestal, Christian Brothers of Syracuse, Auburn, Frankfort, and Mohawk had all-winning seasons. Madison won the Rochester City title and Irondequoit was champ of the Central Western Loop. In the Far Western part of the state, champions were: East (Buffalo City), LaSalle (Niagara Frontier), Canisius (Western N. Y. Catholic) and East Aurora (Erie County).

### **NORTH CAROLINA**

Greensboro, coached by Bob Jamieson, won the AAA crown in a thrilling battle with Durham, 20-13. Class AA winner was Reidsville, always a top challenger, by a 20-6 count over Graham. In the state's smallest class, Edenton downed Bessemer, 41-20, for the crown.

### **NORTH DAKOTA**

Bishop Shanley of Fargo, Eastern champs, defeated Jamestown, 20-7, for the championship of the 16 school East-West Conference, which is tantamount to the state diadem. Coach Sid Cichy's record is now 19 games without defeat and the title was his second in a row. In 1952, Shanley shared the crown with Williston. Mohall, Casselton, Lisbon, Hillsboro, and Watford City had fine small school records.

### **OHIO**

A new coach, but the same winning spirit was the story at Massillon, the most famous high school team in the country. Defeated early in the season by Alliance, the Tigers came back under their new mentor, 25-year-old Tom Harp, to win all the rest and gain statewide acclaim as champions by defeating arch-rival, Canton McKinley, in the season's finale, 26-6. McKinley had previously defeated Massillon's tormentor, Alliance, 26-6, but was itself downed by unrated Warren Mansfield, fourth ranked, was beaten by Massillon, 18-0, so the champs played the highest calibre of opposition they could find. Undefeated and untied were Cleveland Cathedral Latin, Lancaster, Cincinnati Elder, Youngstown Rayen, and Jackson.

### **OKLAHOMA**

Mythical titles were awarded to Ada, Pawnee and Maysville in their



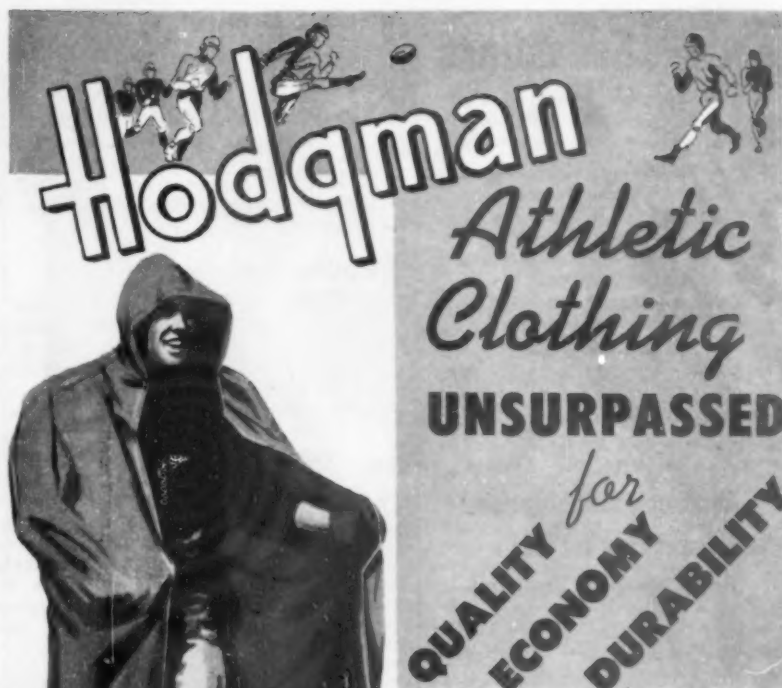
respective classes, Muskogee, tied once, furnished Ada's top competition in Class A, while there were nine other unbeaten: Laverne, Fox, Jenks, Altus, Broken Arrow, Clinton, Douglass of Oklahoma City, Canton, and Wilburton. Some of the aforementioned were tied, but with the 10 and 11 game schedules they play that's no disgrace.

## OREGON

Marshfield of Coos Bay and South Salem played a 13-13 tie in the Class AA finals before a crowd of 12,000. Lee Gustafson tutored the Salem team, while the veteran Pete Susick coached another successful Marshfield eleven. Other schools making the playoff were: Lincoln and Jefferson of Portland, Medford, Pentleton, Beaverton, and Milwaukee. Vale, from the Snake River Valley, defeated St. Helen's 14-7, in an upset for the Class A crown, while Union and Monroe played a scoreless tie in Class B.

## PENNSYLVANIA

America's most prolific producer of college football talent produced plenty of scholastic stars in 1954 and several great teams. In Western Pennsylvania, Clairton won the Class AA crown by virtue of an undefeated, untied record. Neil Brown coached the champs who were tied once in non-loop play. Midland and Braddock shared the Class A crown by playing a 7-7 tie, while South Huntingdon Twp. downed McDonald, 20-0, for the B title. The Pittsburgh city diadem went to Westinghouse for the eighth time in 11 years. In the Northwest, Erie Cathedral Prep, Meadville and Greenville won sectional champions. West Central Pennsylvania had several fine teams. Conemaugh Township, under Steve Terebus, won the Western Conference Class A title, although Bellwood-Antis, now with 21 straight, and DuBois were also undefeated in league play. Beaverdale-Wilmore won the Class B crown but was tied for the Inter-Counties championship with Replogle of New Enterprise. Once tied Williamsport was champion of the very tough Central Penn League, while Carlisle and Mechanicsburg tied for the South Penn crown. The South half of the 51 school Eastern Conference was won by Mt. Carmel under Coach Steve Terry. Schuylkill Haven, defending champion, and Mahanoy Township also were unbeaten but lost out on a rating system. Mt. Carmel thumped North winners, West Scranton, 34-13, for the overall crown. Danville, Susquehanna League champion, had another fine season with 11 straight. South Catholic was Philadelphia champion by virtue of a playoff win over Public titlist, Frankford. Lower Merion and Berwyn were tops in Philly suburbs.



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## RHODE ISLAND

Though tied in their last game, Coach Ed Stebbins' Cranston squad won the Class A championship with a 7-0-1 record. In Class B, Coach Monk Maznicki's West Warwick eleven ran up its sixth straight league title. Burrillville and Lockwood tied for Class C honors.

## SOUTH CAROLINA

Dreher of Columbia had the only undefeated and untied record among the state's 13 Class AA schools. Coached by W. C. Myers, the Columbia powerhouse won 11 straight. In Class A, Mullins defeated Pickens in an overtime game decided by the "Montana" system of alternate plays from the 50-yard line. The game had ended in a 14-14 tie. A similar system was necessary in Class B, where Barnwell broke a 6-6 deadlock with Langley-Bath-Clearwater in the extra session. Norway defeated Thornwell Orophange, 32-13, for the Class C crown.

## SOUTH DAKOTA

Sioux Falls Washington finally had its winning streak broken after 37 straight. An early season tie with East Sioux City, Iowa, indicated that Bob Burns' Warriors were slightly below par, but Casper, Wyo., provided the stunner with a 14-7 triumph in late October. Top honors were shared by Yankton and Sturgis, at opposite ends of the state, both of which won their conference crowns with undefeated records. Wessington Springs was tied once in eight games, playing an independent schedule. In the smaller class, Sisseton (unbeaten within South Dakota) and Pierre (loser of only its last game by a 34-32 count) had exceptionally fine teams. Sisseton had one of the biggest clubs in the state, but dropped its final game to Morris, Minn., highly rated in the Gopher state.

## TENNESSEE

Chattanooga Central was rated No. 1 for the third time in four years. Defeated in their second game by Memphis Central, the Purple Pounders of Coach Red Etter struggled through the rest of the season and clinched first place by defeating Baylor Prep's fine team. Baylor had previously beaten Oak Ridge, Chattanooga's top rival among the public schools. Montgomery-Bell of Nashville, Sparta, and Memphis Humes finished close to the top. Sparta was one of three undefeated teams, along with Alcoa and Huntland, two schools whose relatively easy schedules prevented consideration for state honors. Bruceton and Donelson finished their regular campaigns without defeat, but lost post-season bowl games.

## TEXAS

Abilene brought the state crown back to where West Texans think it belongs—the fabulous District 1AAAA of the state's largest enrollment group, sometimes referred to as the "Southwest Conference of schoolboy football." The Golden Eagles, coached by Chuch Moser, defeated Stephen F. Austin of Houston, 14-7, before over 18,000 fans in the final game. A 29-yard touchdown pass with less than a minute to play settled the issue. Breckenridge, tutored by Joe Kerbel, was the only team to defeat Abilene during the season (in a non-conference game), and the Buckaroos swamped defending champion, Port Neches, 20-7, for the Class AAA crown. Phillips brought a third title to West Texas by surviving a 32-team elimination in Class AA. Killeen was the final round victim, 21-13. Deer Park defeated Mason for the Class A title. Both Phillips and Deer Park were undefeated and untied during the entire season. Ball High of Galveston was Texas' only undefeated and untied Class AAAA team during the regular season, but was stunningly upset by S. F. Austin in the play-offs.

## UTAH

After 23 years, South Salt Lake City finally grabbed its first Class A title, Bob Graves' boys defeating Ogden, 14-0. Murray became another first-time champion in Class B, defeating Springville, 26-0. Both finals were played in U. of Utah Stadium in a double-header program which attracted upwards of 10,000 fans.

## VERMONT

An undefeated, once-tied record meant first place in the coach's poll for Rutland, though most people wondered why Brattleboro wasn't given a share of the crown. Brattleboro played Rutland to a 7-7 tie, but dropped one game to a Massachusetts foe.

## VIRGINIA

An 8-0-1 record in Conference play gained the Virginia Group I title for Woodrow Wilson of Portsmouth. Hermitage of Richmond finished second with a 7-0-1 mark, after a close race in which George Washington of Danville (6-0-1) also figured. There were many fine teams in Group II play, though no state championship is decided. Churchland won the District 1 crown; Osborn of Manassas, District 2; Handley of Winchester and Clifton Forge shared District 5; William Fleming of Roanoke, District 6; and Saltville, District 7.

## WASHINGTON

A semi-official poll awarded the state title to Lincoln of Tacoma,

despite a final game loss to its intra-city rival, Stadium. Lincoln was rated slightly ahead of Aberdeen, John Rogers of Spokane, and Vancouver—all beaten once. Stadium finished fifth on the strength of its upset of the champs. Pullman had the only undefeated, untied record among the Class A schools, but played much smaller opponents and finished eighth in the balloting. Lincoln's coach, Norm Mayer, also guided the Abes to a state title in 1948. Chelan, from Northern Washington, was the highest rated Class B team with an 8-0-0 mark. Winlock (9-0-0) was second. Bill Richards coached Chelan.

#### WEST VIRGINIA

A touchdown and point after in the second period held up for a 7-6 Follansbee victory over defending champion, Barboursville, in the Class A finale. Doug Stone tutored the new champions, who had many anxious moments. With eight minutes to go, they saw a blocked punt go for a Barboursville touchdown, then the game was apparently tied by a plunge for the PAT. But an offside penalty nullified the play. In Class B, Farmington (coached by Ray Kelly) stuttered for a period, then blasted Rupert's defenses in a six-touchdown splurge to gain a 39-13 triumph.

#### WISCONSIN

Green Bay West, riding the crest of a 32-game streak, won the Fox River Valley Conference. Whitefish Bay of the Milwaukee Suburban Conference also finished undefeated among the large schools, while Madison West and Racine Horlick, which shared the Big Eight crown, fielded other strong elevens. Three schools—South, Boys Tech and Washington—tied for the Milwaukee City crown, South losing an early edge after six straight victories. Other undefeated and untied records were forged at: Jefferson, Beaver Dam, Berlin, Bloomer, Boscobel, Hudson, Hurley, West DePere, Westfield, Marion, Blair, and DePere St. Norbert. West DePere and Berlin have two-year perfect streaks.

#### WYOMING

Laramie, outweighed 25 pounds per man, went over the mountains to belt undefeated Cheyenne, 7-0, to gain a share of the Class AA championship with its victim. Coach John Deti did a wonderful job with his lightweights, but perhaps the best team in the state, was little Worland, which won 11 straight and whopped Torrington, 32-7, for the Class A title. Coached by Carl Selmer, Worland has been champ for three years and now boasts a 15-game streak.

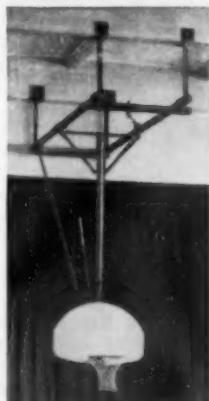
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## O'Brien's Form and Training

(Continued from page 9)

keeping his eyes straight on this spot behind the ring, his shoulders and hips are always in line, and he's thus able to start the put in almost exactly the same position every time.

Parry begins his put with a very deep dip over his bent right leg, his spine being almost parallel to the ground. This low dip gives him a very long lift.

As he begins his move across the ring, the left foot kicks straight up and across the ring, the bottom of the foot pointing skyward and the knee pointing toward the ground. The kick keeps O'Brien low over his right foot and helps his speed across the ring.

The putting stance finds O'Brien with his body still facing backwards. His right foot is planted in the center of the ring, but now has come around 30°. The left foot forms a slight angle with the toe-board, the toes being jammed against the board on the imaginary line through the center of the ring and along the line of put.

O'Brien maintains the backfacing position until the very last moment. Then he explodes, in a combination of power and delicate timing, swinging the shoulders and hips to the orthodox forward position. This movement is a right-to-left rotation of the hips and shoulders, which he tries to keep parallel at all times.

Maintaining the same position of the hips and shoulders is a key factor, and speed across the ring is of paramount importance. Once the quick explosion of the reverse takes place, Parry "can only push and hope for results." A fast thrust, wrist snap, and good follow through complete the put.

Parry maintains his form is basically the most simple style ever used. He says:

"You can utilize more hip drive and more of a lift from the abdominal region and the large muscles of the back, all this plus the orthodox use of shoulder and arm muscles.

"The longer pushing radius you get, the longer the shot is pushed by the body. The longer you push the shot, applying force against the moving object, the longer the throw will be. That is basic physics. By the time my shot passes the point where the orthodox effort begins, it is moving with the putting effort well under way."

In its practical effect, the O'Brien form, by starting low and facing the rear, extends the width of the ring. Measurements show that Parry gets a push some 10 to 12 inches longer than with the old style.

The new form has achieved the distance O'Brien hoped for. He says it also achieved his other objective of throwing easier. Though a few small muscles in the right leg and on both sides of the body at the waist haven't responded to the effort to avoid fatigue

or muscle strain, the action definitely is easier.

Feeling as he does that his form is basically simple, Parry believes any physically equipped shot putter can use it, be he a beginner or a veteran. Those who aren't physically equipped, which to O'Brien means one who isn't fast, strong, over 6 ft. 2 in. and 200 pounds, can use the style in part.

Parry himself has always been big and fast and strong. But he has taken none of these gifts for granted, working to make himself still bigger, faster and stronger, particularly the latter.

His diet is designed to maintain the necessary strength, health, and size. His training program includes lots of running to strengthen the legs and retain speed, which has enabled him to run 100 meters in 10.8. And his yearly program includes a sizable portion of weight lifting, which has made him stronger and heavier.

Parry's year-round training program starts in the winter after he has done nothing but rest all fall to avoid mental staleness. From December to the middle of March, he works out three times a week on weight lifting.

### WEIGHT-TRAINING PROGRAM

The first week O'Brien uses semi-light weights, 50 to 160 pounds, to condition himself for heavier exercises. Poundage increases through the months as strength is gained.

Favorite lifts include: curls, 50 pounds, 10 reps, sets of 4; tricep pull-overs, 60 pounds, 10 reps, sets of 4; situps, bent knee position, 30 reps, sets of 4; clean and jerk, 150-160 pounds, speed reactions, sets of 5; military press, 160 pounds increasing to 220, 5 lifts; bench press, prone position, 180 to 225 pounds, 5 to 8 reps, sets of 6 to 10.

In the early spring, on the conclusion of weight lifting, O'Brien runs. He begins throwing only two weeks before the season's first competition. Until then, he works to condition his body for throwing and away from lifting. Lifting has given him strength, but also has made him hard and sometimes bulky. The early spring program of running, calisthenics, and stretching loosens up the body for greater leverage, but leaves the strength.

On Monday, Parry will do general calisthenics (jumping jack, toe touches, sit-ups, trunk rotation, etc.), then run and walk for one and a half to two hours. He runs the straightaways at half speed and walks the turns.

Tuesday's workout is the same.

Wednesday's training session is the same, except for the running which is at three-fourths speed, and four or five laps of continuous jogging are added at the end.

Thursday, Friday and Saturday the running is at full speed, and the curves are jogged instead of walked.

Sunday calls for a "shake-out" period, with jogging and stretching to loosen up.

Deep breathing exercises to combat fatigue and increase chest and lung capacity are part of the daily routine. All of his training is done in sweat clothes, except when he throws for maximum distance.

As competition nears, Parry begins to throw and works up to where he can handle two hours of putting at a stretch. He works on standing throws, with both the 12 and 16 pound shots, to coordinate his shoulders, hips, and leg drive. Throwing at three quarter to half strength, he builds slowly from 45 to 52-54 feet.

Practicing before a mirror is a vital part of the O'Brien technique. In this way he achieves a visual picture of his movement, with observation of hip and shoulder alignment, smoothness of action across the ring, maximum usage of big muscles of the body, and timing and coordination of movement.

For some 15 minutes, usually after the other work, Parry practices moves across the ring without the shot. He does this to get the feel of solid footing and the correct landing position.

As the season progresses, O'Brien cuts his workouts to as little as an hour and works on form and timing without so much throwing.

His work schedule varies, of course. But Parry always proceeds on the theory that in the early season his main concern should be conditioning, thus the emphasis on physical exertion. In the late season, he's concerned mainly with distance, proper rest, and retaining form.

The O'Brien intake includes plenty of steaks (medium rare), two and a half quarts of orange juice per day the year around, and, during the season, lots of honey for quick energy. Parry never drinks coffee or smokes, and has a little beer only during the off season.

He's the first to admit that the results of his frequent swigs of honey during a meet are as much mental as physical. This is an important point to note, for O'Brien's mental preparation for competition is as thorough as his physical.

Parry begins with the theory that no job or feat is too big for anybody willing to concentrate 100% and give himself whole-heartedly to the task before him. "Think big and with proper stimulation, work and effort and some luck you can achieve what you seek" is the O'Brien motto.

The champ concentrates fiercely in action. He thinks of speed across the ring, proper alignment of shoulders and hips, and the pinpoint timing of the explosion when all his strength is exerted to bring his body out of the backward facing position and into the forward throwing position.

The mental approach actually begins long before a meet. Depending upon the size of the meet and the amount of competition, Parry will begin working on it as long as four or

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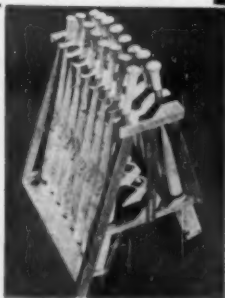
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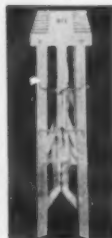
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five days ahead of time. He thinks of what he wants to achieve, and tries to analyze what to expect in the condition of the ring, weather conditions, competition, number of entrants, and size of the crowd. All these factors tend to stimulate his effort.

If the occasion is a real big one, the mental preparation begins much earlier. An example is the period before the 1952 NCAA when he looked forward to a rematch with Darrow Hooper who had won the 1951 NCAA. For two weeks prior to the meet Parry kept Hooper's picture on his desk. What pictures Parry conjured up in his competitive thinking only he knows, but it's a fact that he won the NCAA with a new record and beat Hooper by almost three feet.

Parry expects to be called for Air Force duty in January or February. He hopes to keep on competing. If he's able to train adequately, there are few who will dare to put a limit on the achievements of the young man.

## Tennis Stroking

(Continued from page 7)

guilty of over-gripping.

You can relax the muscles in the lower arm by rotating the hand vigorously. Play a while, then test the instrument again. Remember you lose touch and sensitivity by holding the racket too tight!

**WEAK BACK SWING.** For the most part, hitting power is obtained by bringing the body weight into the stroke. The transfer of weight can be simplified by bringing the racket fully to the rear. Timing is also simplified by a full stroking arc.

**STARTING STROKES TOO LATE.** The "naturals"—those lucky players who can time the ball right from the start—have no problem in beginning the swing. Many newcomers, however, do experience trouble in launching the strokes. Balls "get on them" too soon, and they don't have time to bring their racket back.

Players should begin the back swing after their opponent's return crosses the net and starts coming down. They should time their strokes to the bounce of the ball!

**NOT GETTING SET.** In watching Grade A tennis, you'll observe many returns from awkward positions. A player will hit balls practically off the left ear and right toenail. This is never due to choice but to the opponent's ability.

Experts realize the importance of getting set for each drive. They know that a step taken in a split-second can mean the difference between a good and a bad retrieve. If position is necessary for champions, it must be exceedingly important to beginners. To get set:

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1. Start toward the return area early.

2. Shorten stride as you reach hitting position.

3. Keep the feet about shoulder width apart in playing stance.

4. Step—don't reach or lunge for the ball.

**PULLING THE STROKE.** Direction is determined by the course of the racket head. This begins at the moment of contact and continues until the stroke is completed.

If you pull the frame across your chest too rapidly, it will result in excessive top-spin and loss of accuracy. Try to hit *into* and *through* the ball! By keeping in mind the position of your opponent's baseline, greater depth can be realized.

**LOW SERVICE TOSS.** Service should be easy. Novices who attempt to learn a twist or slice too soon, are inviting trouble. Start with the flat service. This is similar to an overhand throw. Toss the ball *slightly higher* than you can reach with the arm and racket extended and attempt to coordinate the toss with the serving swing.

**FAULTY EQUIPMENT.** It isn't necessary to start with the most expensive equipment. The racket should fit in regard to *weight* and *grip*. Players buying a reasonably good racket will enjoy two advantages. First, the frame will have sufficient balance and workmanship to aid stroke production. Second, the racket will last longer and will take restringing.

Under ordinary conditions, a good frame will furnish a year's service. Used longer, the performance efficiency will decrease. Seek the advice of a qualified instructor in selecting proper equipment.

**UNWISE PRACTICE.** Play when you're keen, eager, and the muscles are responsive! Don't drag out practice sessions—45 minutes to an hour is enough for the average player. You may have the stamina to continue, but it's beneficial to come back later.

Avoid taking the court directly after meals, following a swim, or when suffering a headache. *Pace* yourself and work hardest on your *weak* points. If possible, obtain the help of an experienced teacher.

**WILD HITTING.** Familiar to all teachers is the complaint: "I'd be alright if I could only keep my balls in the court!" Control is a vital factor in sports. It should be obvious that the harder a drive is hit during the beginner stage, the more difficult it will be to direct properly.

Our plea is: *Go slow.* Learn to stroke the ball correctly, *then* add speed. Remember, direction is determined by your follow-through.



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## New Books on the Sport Shelf

- **INDIVIDUAL AND TEAM SPORTS FOR WOMEN.** By Donna Mae Miller and Katherine L. Ley. Pp. 502. Illustrated—drawings and diagrams. New York: Prentice-Hall, Inc. \$7.35.

BY integrating practical teaching methods with analyses of skills, this superbly turned out text will enable all teachers of women's sports to do a more effective job with both large and small groups.

Part I deals with methods and materials common to all activities such as effective teaching, evaluating, techniques, audio-visual aids, tournaments, and drill formations.

Part II covers individual and team sports, namely—archery, badminton, bowling, golf, skating, skiing, tennis, and track and field. Each sport contains a description of the activity, suggestions for class organization, an analysis of basic skills, specific evaluating techniques, and teaching aids.

Part III embodies the team sports of basketball, field hockey, soccer, speedball, softball, and volleyball.

The supplementary drawings and diagrams are excellent, and the book should serve as a valuable guide for in-service teachers and recreation, club, and camp leaders.

- **BASKETBALL IN ACTION.** By Oscar Fraley. Pp. 94. Illustrated—photos. New York: A. A. Wyn, Inc. \$2.95.

BASED on more than 300 continuous action photos, this 8½" x 11½" instructional book offers a completely illustrated course on all the basic basketball skills—each skill being demonstrated by a specialist on the famous N. Y. Knickerbockers!

Every type of shot, pass, pivot, rebound, and dribble is demonstrated and analyzed tersely, with coordinated offensive and defensive play demonstrated by the Hofstra College team. The great majority of the picture sequences are excellent and can be studied with great benefit by both coaches and players.

- **CURRICULUM DESIGNS IN PHYSICAL EDUCATION.** By Charles C. Cowell and Helen W. Hazellon. Pp. 404. New York: Prentice-Hall, Inc. \$5.50.

THIS careful and comprehensive study stresses the integration of the unique objectives of physical education with the summary intention of general education.

Part I presents a thorough analyses of curriculum, its nature, its function, and its problems. Part II offers a discussion of the implications of the curriculum, while Part III deals with the organization of the curriculum from nursery school through college, including the intramural, interscho-

lastic, and intercollegiate programs.

The book should prove concretely useful to teachers, supervisors, and undergraduate physical ed students.

- **GYMPHLEX-DYSON OLYMPIC CHARTS** (11 in set). Devised and compiled by Geoffrey Dyson. New York: Soccer Associates. \$9.75 (complete set).

THE principles and techniques of 11 basic track and field events are vividly and concisely explained in this series of charts devised and compiled by the chief coach of the British A.A.A. The charts are 21 x 30 inches large and come in two colors.

The illustrated events include sprinting, middle distance, relays, hurdling, high jump, long jump, discus, shot put, javelin, hammer throw, and pole vault. (Soccer Associates may be reached at 10 Overlook Terrace, New York 33, N. Y.)

- **ATHLETIC BUILD ANALYZER and YOUR ATHLETIC BUILDING RATING Forms.** Chicago: Athletic Labs. \$1.

THESE 11½" 9½" charts enable you to determine the best physical types for the various team sports. They enable you to score each part of the body and thus arrive at an overall physical build index. The Analyzer plus four baseball and football Rating forms (each for a different position) sell for \$1 a set.

- **PHYSICAL EDUCATION SYLLABUS.** By James W. Long, Harold M. Barrow, and Marjorie Crisp. Pp. 168. Illustrated—drawings. Minneapolis: Burgess Publishing Co. \$1.75.

THE purpose of this syllabus is to provide a textbook for students in physical education service courses at both the high school and college levels. Adapted to the needs of both men and women, it provides an orientation into the objectives, needs, values, and activities of physical ed.

Basic information concerning the history, place in the program, facilities, playing terms and rules, fundamentals, and strategy of 22 different activities is included. The activities covered are: angling, archery, badminton, basketball, bowling, touch football, golf, handball, field hockey, horseshoes, rhythms, shuffleboard, soccer, softball, speedball, swimming, table tennis, tennis, track and field, tumbling and stunts, volleyball, and weight training.

Besides these materials, this handy pocket-sized book contains a valuable supplement that includes a functional body mechanics rating chart, personal data sheet, test and measurement data sheet, and a score card for the general motor ability test.

- **RECREATION LEADER'S HANDBOOK.** By Richard Kraus. Pp. 299. Illustrated—drawings and music scores. New York: McGraw-Hill Book Co. \$4.75.

HERE is a practical handbook of methods and materials for recreation leaders working with groups of varying sizes and ages. The author compounds an understanding of leadership objectives and techniques with a wide variety of time-tested materials, including an excellent assortment of surefire play activities, active and inactive games and mixers, folk and square dances (together with the musical scores), social dance ice-breakers, informal dramatic activities, and community sing programs.

- **MECHANICS OF THE POLE VAULT** (2nd edition). By Richard V. Ganslen. Pp. 73. Illustrated—drawings. \$1.

WRITTEN by the greatest pole vaulting authority in the world, this is undoubtedly the finest treatise on the event ever written—covering the event in exhaustive detail. This second edition is a great improvement over the first, being printed (offset) and bound instead of mimeographed. For your copy, write Dr. Richard V. Ganslen, Dept. of Zoology, Univ. of Arkansas, Fayetteville, Ark.

## Wheat Germ Oil

(Continued from page 37)

him. I photographed him in slow-motion and compared his style with that of Porter and Dillard. We added 20 (3 min) capsules daily of wheat germ oil to his diet. In three to four weeks, he seemed to regain his stride, won the Big Ten title in 14.3 and finally the NCAA title in 14.2.

These two experiences, in quick succession, seemed to indicate some help from the wheat germ oil. In the light of the trends in the laboratory data, they seemed very significant. But as experiments, they cannot be called controlled scientific work. Other well-known athletes are experimenting with wheat germ oil, wheat germ and combinations of these, while others are on placebos (dud capsules), or taking vitamins. In time, some meaningful comparisons can probably be made.

It's virtually impossible to match groups of athletes in a special event or in other physiological or psychological tests. Athletic teams aren't adaptable to this practice and there are usually not enough subjects to make good group comparisons.

### RESULTS ON OLDER SUBJECTS

Three experiments on older subjects were completed in 1953 and 1954.

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one experiment in which eight middle-aged subjects took wheat germ oil in the same dosage (20, 3 minim capsules) there was no change in weight  $\pm$  2 lbs. for this group, or for the synthetic vitamin E group of eight men, or for the control group of three subjects. These data are in the thesis by Storm.<sup>10</sup>

The most important experiment was a staff affair in which two groups matched in age and all-out treadmill run time were trained in a combination of vigorous training exercises followed by swimming in cool water (76-78° F.). Two other control groups were carried along, one on wheat germ oil and one on nothing.

The results showed a gain in the all-out treadmill run of 51.5% for the WGO group, compared to 19.4% for the matched parallel group on devitalized lard placebos. The control group on WGO gained 3.78%, compared to no gain for the other inactive group taking no supplement. Data have been submitted for publication to the *Research Quarterly*.

Other "naive" tests were used because performance tests are subject to "will power" variations which may becloud the results. But when the results looked the same for the heartograph test, which has always had good correlations with treadmill run time, we knew the results were physiological and not just psychological, due to being motivated to run longer.

## HEARTOGRAPH RESULTS

The heartograph results showed 21.3% gain for the WGO group, 4.94% gain for the lard placebo group, a 6.0% loss for the inactive control group on WGO and a 6.2% loss for the inactive control group taking no supplement. Similar trends favored wheat germ oil on the Schneider Test and three Vertical Jump Reaction Time Tests, including jump-reactions to light, sound and combined signals. The sub-groups taking the WGO were always better (made more improvement) than those that did not take the oil.

In 1954, the above experiment was repeated. The trends were the same, but in the duplicate experiment there were 10 men who were in the program the summer before. Nine out of these men did better on the treadmill run when they were on WGO than when they were on placebos. The other man was about the same.

Average results do not indicate the full effect. Some men who need the supplement badly and who are much out of condition, respond more fully to the supplementary feeding. We're much impressed by the cases which respond so markedly, but we don't know any way as yet to tell that in advance.

<sup>10</sup>Storm, Walter: "The Effects of Training and a Dietary Supplement on Muscle Symmetry and Fat Distribution of Adult Males." Urbana: M.S. thesis in Physical Education, 1952, pp. 43.

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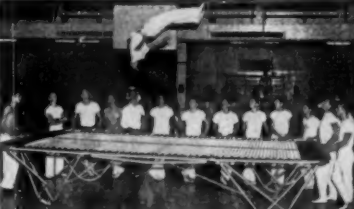
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## Pole Vaulting

(Continued from page 16)

preceded by a sound vault, is no struggle and takes no super strength, just alacrity.

2. *Turn.* The body turn is natural to the arm-pull and blends into the pull as the body is passing the hands. Because of the extra force applied by the upper hand (the longer arm), the body has a tendency to gradually turn toward the pole from take-off.

Cornelius Warmerdam, the present world record holder, expressed himself as follows: "I never concentrate on the turn, but when it is off I can usually trace it back to my take-off."

The legs may be manipulated more precisely when the vaulter has grooved his vault with continuity throughout. The scissoring motion is natural to most vaulters. The outside leg cuts across and up toward the pole, and the other leg back and up as the body turns.

The outside leg is usually the height leg. It maintains the straight line of the body through the hip on release. The lower leg crosses the bar first with an angle at its hip, and is the balance leg.

### RELEASE

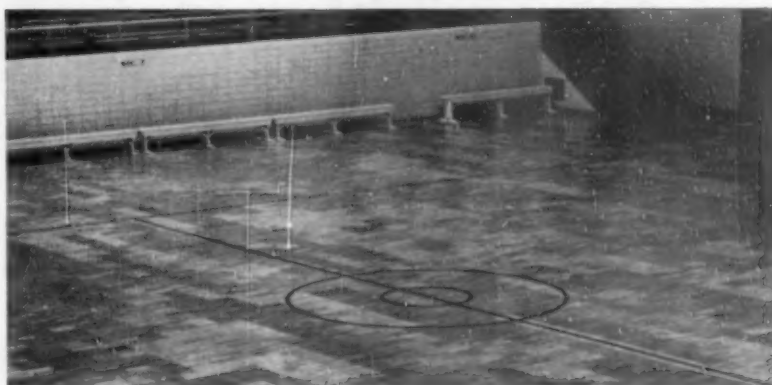
1. *Extension of Arms, or Push-Up.* The push-up action is merely the explosive finish of a complete arm-pull. There's no time to hesitate or gather for a push after the turn, or wait for the pole to reach the vertical. The action here is just one continuing motion of straightening the arms up and off the pole.

If the body fails to pass through a good initial pull position, the pull of the arms is directed by the pole, and the arms will extend more parallel with the ground than vertically along the pole. This stops the forward progress of the pole and, of course, adds nothing to the height of the body. It actually cuts off the action just as the momentum of the vault should be delivered to the body in its upward surge for height. In other words, the "vault" is just beginning.

2. *Bar Clearance.* It's easy to get the hips over the bar, but the trick is to gain the necessary momentum for the chest to clear. The whole vault, from take-off through release, must be nearly perfectly coordinated and timed. Preciseness increases as does the height.

As the pole is released, a throwing back of the chest, head, and arms combined with the checking of the downward drop of one or both

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legs and folding them back toward the head, insures maximum body height. This "unjacking" motion also throws the arms clear of any unintentional removing of the bar.

A statement by Ken Doherty<sup>6</sup> tells why the aforementioned motion off the pole, which is commonly called the "flyaway," must be taken: "The push-up does not begin as the pull-up ends. Rather, the two are a part of a single unified movement. There can be no waiting at this point for an arch or jackknife."

The lower the legs and hips are allowed to drop over the bar before the pole is released, the less efficient the vault clearance and the harder it is to save the vault. The release should be effected before either leg has dropped to bar level. Never reach the legs out for the bar. The body should go up past the bar and the release attempted while the body is still rising.

Many a good vaulter loses precious inches, in some instances feet, because of an ever so slight hesitation or overemphasis at one or more stages of the vault.

Here are some specific conclusions which the writer has attempted to inculcate in his teaching habits:

1. If the proper take-off, swing, pull-up, and release are integrated into a continuous well-timed and directed movement in the proper sequence, stressing of lesser techniques to a harmful degree will be avoided and overemphasis on minor points will not occur to detract from the full movement of the body or the efficiency of the vault.

2. The point of take-off must be determined by the ability of the vaulter to drive smoothly into the pole from a full last stride; neither jumping onto the pole with an attempt to pull nor being snapped prematurely from the ground.

3. The success of each succeeding phase of the vault depends on the efficient employment of the preceding phase.

4. The continuity of the total vault depends upon the take-off. The take-off, therefore, is the most important single phase of any vault.

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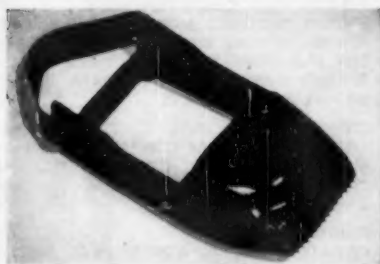
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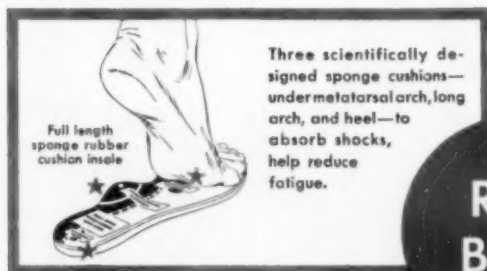
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